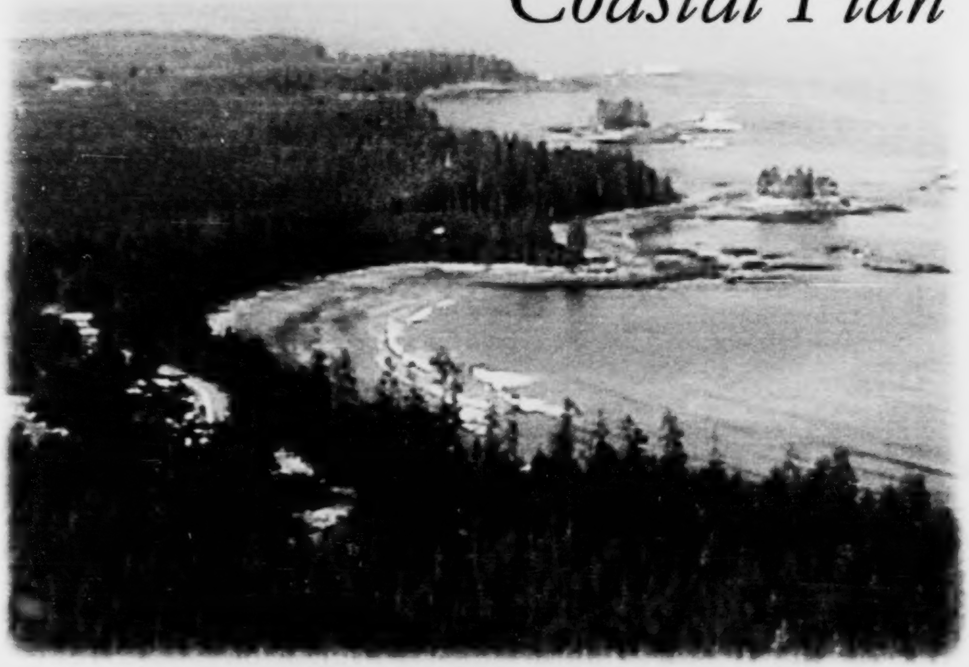
North Island Straits

Coastal Plan



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Dear Reader:

Re: Approval and Implementation of the North Island Straits Coastal Plan

As Minister of Sustainable Resource Management and Minister responsible for Land and Water British Columbia Inc. (LWBC), I am very pleased to give my approval to the North Island Straits Coastal Plan.

This plan is developed pursuant to provincial jurisdiction over coastal and foreshore areas of British Columbia's coast. It will assist LWBC and other provincial agencies when considering applications for coastal tenure. It will also assist local coastal communities and participating First Nations by identifying opportunities for future development, conservation and recreation. It will be valuable to individual development proponents and the public by identifying in advance the opportunities, constraints and limitations to various types of Crown land and marine uses that may be contemplated.

This plan and the process used to develop it satisfy the draft governance principles for sustainability that are being developed by our ministry on behalf of government. I am very pleased that this plan has the support of the Regional District of Mount Waddington, representing the area's local communities. As a living document, this plan will require regular monitoring and will likely be subject to variations and amendments as circumstances change and new information is made available. In the meantime, I look forward to seeing this plan play a strong role in generating new opportunities to achieve sustainable land and resource use in the North Island.

Yours truly,

Stan Hagen

Stanley B. Hagen
Minister

**Ministry of
Sustainable Resource
Management**

Office of the Minister

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Acknowledgements

The completion of the North Island Straits Coastal Plan has been made possible by the dedication and collaboration of a number of provincial agency staff. Special thanks are extended to planning team members: Rob Paynter (Project Leader, CMPB), Stephen Connolly (CMPB), John Bones (CMPB), Graham Winterbottom (CMPB), David Cruickshank (Regional Office, MSRM), and to Simon Norris and Carol Ogborne (Decision Support Services, MSRM). Duncan Williams, Keith Anderson, Richard Brunning and John Willow (LWBC) provided valuable assistance in enhancing the interpretation and effectiveness of the the Plan. Early guidance and advice was received from Mark Zacharias, Chris Hamilton and Jodie Wilson of MSRM. Advice and support from Mark McIntyre (MOF, Port McNeill) and Barron Carswell (MAFF) is also appreciated.

Federal and local government staff also made important contributions to the plan. In particular, thanks are extended to Anne Marie Koch and Board members of the Regional District of Mount Waddington, Brenda Bauer and staff (DFO Port Hardy), Michael Dunn, Krista Amey and staff of the Canadian Wildlife Service (Vancouver) and Bob Gowe and the staff of the Canadian Coast Guard.

We would also like to thank the many representatives of community groups, First Nations, and stakeholder groups who provided their time and effort in helping shape this Plan. Particular acknowledgement is made to community representatives who participated in review of the draft Plan and open houses, including members of the Plan Advisory Board for the Regional District of Mount Waddington, and members of the Inner Coast Natural Resources Centre.

Acronyms and Definitions

CMPB: Coast and Marine Planning Branch, MSRM

CCG: Canadian Coast Guard, Fisheries and Oceans Canada

CWS: Canadian Wildlife Service, Environment Canada

DFO: Federal Department of Fisheries and Oceans (officially referred to as Fisheries and Oceans Canada)

LWBC: Provincial Land and Water British Columbia (formerly BC Assets & Land Corporation)

MAFF: Provincial Ministry of Agriculture, Fisheries and Food

MEM: Provincial Ministry of Energy and Mines

MOF: Provincial Ministry of Forests

MSRM: Provincial Ministry of Sustainable Resource Management

RDMW: Regional District of Mount Waddington

WLAP: Provincial Ministry of Water, Land and Air Protection. This agency includes the provincial park and protected areas management and planning function.

AO1: Areas with high to moderate biophysical capability for finfish aquaculture; and which meet current government siting criteria

AO2: Areas with low to poor biophysical capability for finfish aquaculture; and which meet current government siting criteria

CCGAT: Central Coast Gap Analysis Team. A provincial interagency technical team formed in 1996 to review and recommend candidate upland (terrestrial) and marine protected areas under the Protected Areas Strategy (PAS) for further consideration in the Central Coast LRMP planning process. The CCGAT published a report in May 1997 which provided revised study areas for the Central Coast LRMP area.

MPA: Marine Protected Area. A marine protected area may be established under a variety of provincial and federal government statutes, either as a temporary or permanent area for the conservation or protection of important biological, recreational and cultural features or values. An MPA may include a provincial marine park, a national marine conservation area, and a marine protected area under the *Canada Oceans Act*.

PAS: Protected Area Strategy of the Province of British Columbia. The PAS policy and program was established in 1992 with the intent of setting aside 12% of the provincial land base for representation of natural ecosystems, as well as for specific recreational, cultural or archaeological values. The majority of protected areas in BC are established as provincial parks.

Red Listed Species: Includes any indigenous species or subspecies that have, or are candidates for status as extirpated, endangered, or threatened species in British Columbia

Blue Listed Species: Includes any indigenous species or subspecies considered to be vulnerable in British Columbia.

Upland area: The terrestrial area extending approximately 200 meters inland from the highest tide line.

Foreshore (intertidal) area: The area between the mean high tide and low tide mark (i.e. below zero tide).

Nearshore area: The subtidal area below low tide mark (i.e. below zero tide), generally extending to the 20 metre isobathymetry depth.

Offshore area: the subtidal area seaward of the 20 metre isobathymetry depth.

Invertebrates: Includes red, green urchins, octopus, crab, prawn, shrimp, sea cucumber.

Tenure: A legal right to occupy and use Crown land under the *Land Act*. A tenure may take the form of a permit, licence of occupation or lease. The type of tenure is normally dictated by LWBC policy and conveys different rights, terms and conditions of use and occupancy.

Land Act Notation of Interest: A notation on LWBC reference maps of an interest in an area of Crown land by another government agency. It ensures an initial referral to agencies whose particular mandate, programs or interests may be affected by the issuance of a tenure, and provides the opportunity for the affected agency to identify priority issues, concerns or conditions. It may be used over areas where further planning is contemplated. It does not preclude the acceptance of land applications.

Land Act Reserve: A reserve established on LWBC reference maps to temporarily withdraw Crown land from disposition by tenure. A reserve is placed over an area to permit other agencies to undertake planning, to provide temporary protection or to maintain options for future use.

UREP: A *Land Act* reserve or notation of interest established for the "use, recreation and enjoyment of the public."

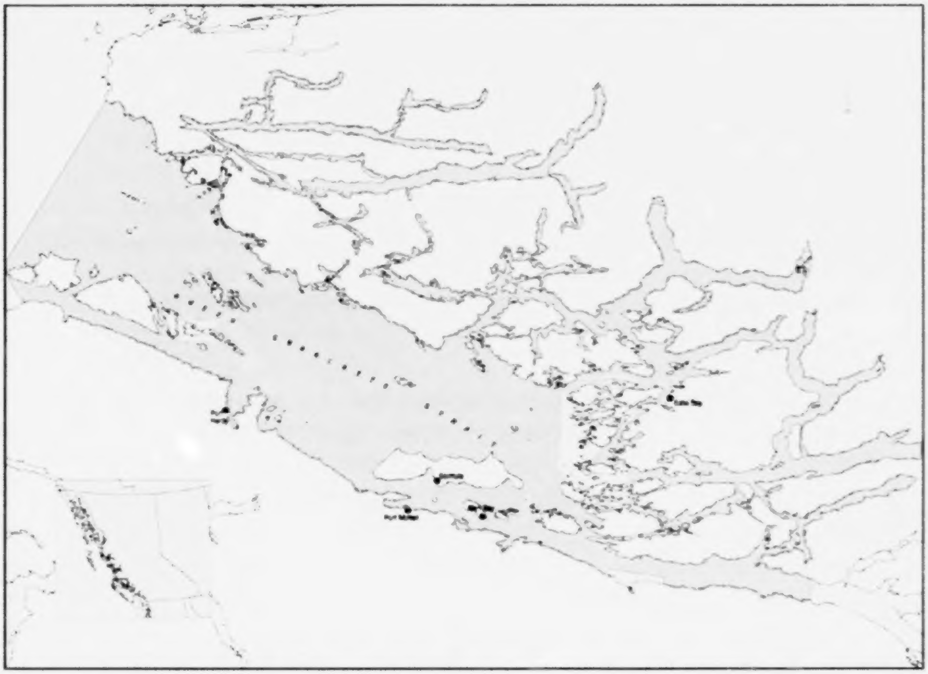
Introduction

1.1 Plan Location

The North Island Straits (NIS) coastal Plan Area is situated on Canada's Pacific coast between Vancouver Island and the mainland of British Columbia (Figure 1). The NIS Plan Area includes the foreshore and nearshore areas of Vancouver Island, the mainland coast and the associated islands and islets from Port Neville in Johnstone Strait to Cape Caution in the Queen Charlotte Strait. It extends approximately 138 km from east to west, encompassing some 343,000 ha of foreshore and nearshore.

The NIS coastal Plan Area contains a local population of 13,100 residents. The largest communities are Port Hardy and Port McNeill on Vancouver Island's northeast coast. The Plan Area lies within the boundaries of the Regional District of Mount Waddington (RDMW).

Figure 1 NIS Coastal Plan Area



1.2 Plan Business Case and Intent

Coastal communities in British Columbia, including those in the NIS Plan Area, have been experiencing significant economic decline and population loss due to continued reductions in industrial forestry and commercial fishing. These communities are now turning their attention to opportunities to attract and accommodate sustainable economic activities in coastal foreshore and nearshore areas.

Resolution of conflicts and competition among competing uses is an important requirement in assessing and planning new opportunities. The Plan Area supports the majority of British Columbia's salmon farming industry, which is now looking for expansion and relocation opportunities. The Plan Area includes the islands of the Broughton Archipelago, a popular ecotourism destination area on British Columbia's coast. The Plan Area continues to be an active and continuous timber harvesting area, with numerous prime foreshore areas having been allocated for log handling activities. Marine transportation activities, such as log transport, cruise ships and ferry services also compete for foreshore facilities, anchorages and open passage ways.

The Plan Area also contains significant wildlife species and sensitive marine habitat areas that are sensitive to improperly sited or poorly managed activities. Some of these areas have been identified as prime candidates for future marine conservation or protection.

First Nations have used the North Island Straits area for centuries, and the use and health of its resources remain vital to their cultural and economic well-being. Many current uses are of concern to First Nations. Many First Nations are demanding greater participation in foreshore and nearshore development activities.

A priority of the Ministry of Sustainable Resource Management (MSRM) is to use coastal planning to enhance sustainable economic development opportunities of coastal communities (including First Nations communities) and to uphold environmental values. The NIS Coastal Plan intends to provide the basis for future coastal development on an environmentally sustainable basis. It is required to be consistent with the Ministry's draft governance principles for sustainability (Appendix 1).

1.3 Plan Scope and Jurisdiction

The NIS Coastal Plan provides recommendations for acceptable uses in the foreshore and nearshore, which is under provincial government jurisdiction. These recommendations address a range of tenure programs that are administered by Land and Water British Columbia Incorporated (LWBC). The Plan also addresses recreation and conservation values that should be reserved or withdrawn from tenure opportunities. In some areas, the Plan also contains recommendations for resolution of issues concerning the interaction of fisheries, public recreation, navigation and other activities that are not administered by the province.

The Plan does not address private land, or federal land or Indian Reserves. Its recommendations will not limit any treaty negotiations or settlements that may occur respecting foreshore and nearshore rights, ownership or uses. Its recommendations are also not intended to alter or interfere with provincial legislation or local area by-laws, although it is preferred that local government plans will be consistent with the NIS Plan.

Jurisdiction[1] in the coastal zone is complicated by the relationship between land (including seabed) ownership and legislative authority over resources. There is a common public misconception that the province has no jurisdiction or role in coastal management, due to federal government authority over fisheries management, marine mammal management, migratory birds, and marine transportation and safety, and the high profile of these issues in coastal communities.

The province, however, is an important land owner in the coastal zone. The province owns the foreshore (intertidal) areas of its coastline. In addition, the province owns coastal "inland waters", or waters "within the jaws of the land" (*intra fauces terrae*), and the lands covered by these waters. Inland waters are waters within an indented coastline, such as harbours, bays and estuaries, including areas between headlands along the outer coast. The Supreme Court of Canada, in a 1984 decision, also confirmed the province's ownership of the waters and the lands, minerals and other natural resources of the seabed and subsoil in the Georgia, Juan de Fuca, Johnstone and Queen Charlotte Straits. Thus, many sub tidal areas are also owned by the Province.

Ownership of the waters and seabed of Dixon Entrance, Hecate Strait and Queen Charlotte Sound is claimed by both the provincial and federal governments. Offshore areas along British Columbia's western coastline from the low water mark, or from the boundaries of inland waters, seaward to the territorial limit are owned by the federal government.

Thus, the province's ownership and legislative jurisdiction over such matters as the management of provincially owned public lands, provide the rationale for provincial coastal planning, park and ecological reserve establishment, and tenuring of coastal foreshore and inland waters.

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[1] This overview is neither a legal interpretation, nor a position statement of the Province of British Columbia; nor does it address First Nations' rights and title issues.

Local governments and private property owners also influence coastal management activity, due to upland owner rights and decisions and local government plans, zoning by-laws and development requirements. In addition, First Nations have legally established Aboriginal rights that may be potentially affected by coastal developments, and which must therefore be taken into account by the provincial government in the decision making process for foreshore and nearshore use applications. Provincial consultation policies reflect recent court decisions and require provincial agencies to seek to accommodate First Nations interests in land use decision making processes.

Several First Nations in the Plan Area are in various stages of the treaty negotiation process with the provincial and federal governments, and have made claims of title over land and water areas.

1.4 Planning Process

The planning process used to develop and complete the NIS Coastal Plan is generalized in Figure 2. The process was government-led, using a consultative approach to public and interest group engagement, rather than through formal, consensus-based negotiation using stakeholder planning tables.

Consultation with the public took place primarily through public open house meetings, held at the beginning and the end of the plan development stage. Open houses were advertised in advance and held during November 6 - 7, 2001 in Port Hardy and Port McNeill to outline the planning process, explain the terms of reference, and obtain comment on available resource information. Letters of invitation were also sent to stakeholder groups and to First Nations in advance of these open houses. These meetings were attended by approximately 50 persons.

Public open houses were advertised in advance and held to review the draft planning product during June 10 – 13, 2002. First Nations and interest groups were also advised of these meetings and invited to attend. To assist the public in review, the draft plan was posted in advance of these open houses on the MSRM coastal planning web site. Sixty two individuals attended these open houses, which took place in Alert Bay, Sointula, Port McNeill and Port Hardy. Important commentary and suggestions were made by a number of attendees.

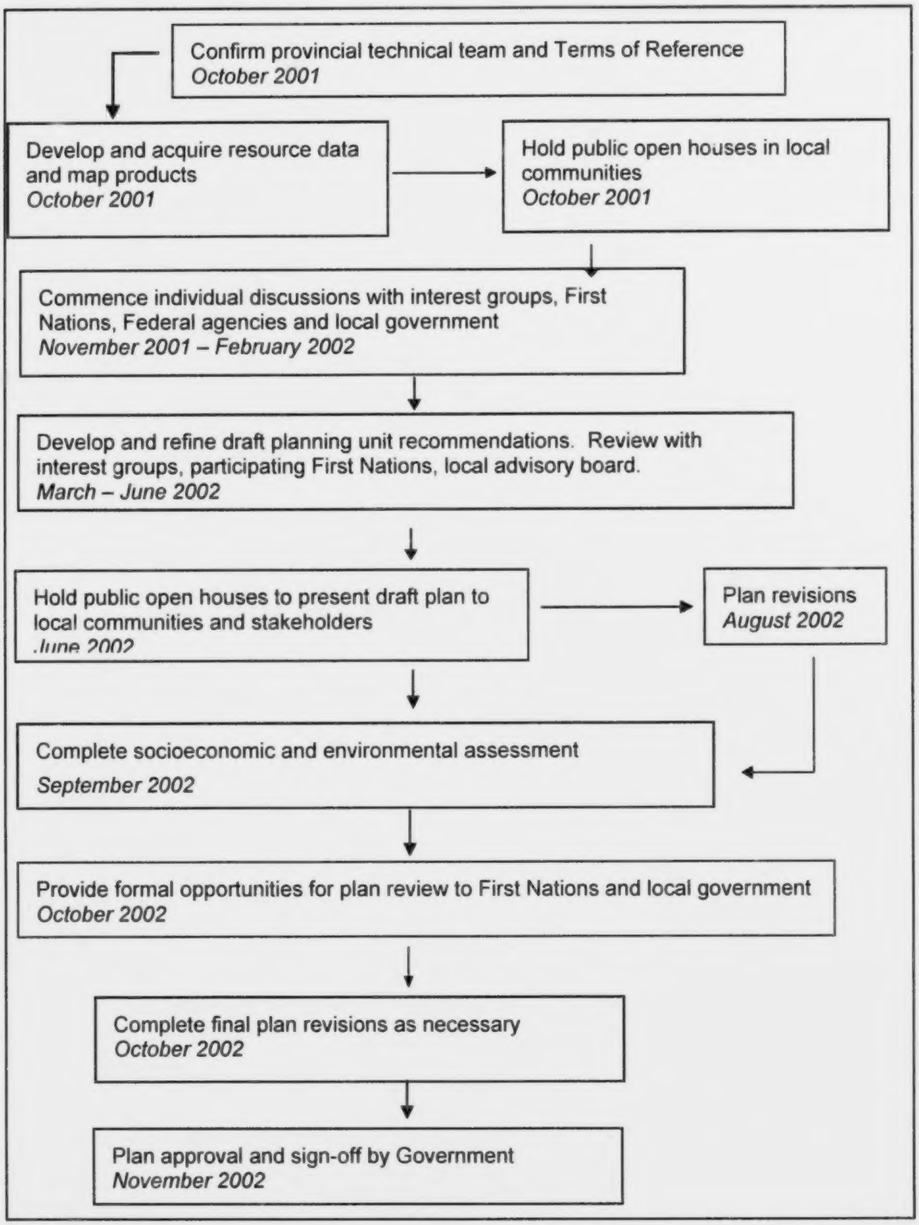
Due to criticisms at the Alert Bay and Sointula open houses respecting public review opportunities, staff subsequently funded the Inner Coast Natural Resources Centre of Alert Bay to collect further input and resource uses recommendations from local experts in outlying areas, and from its information files.

During the development of the NIS Plan, MSRM staff met with many different interest groups, representing both local and non-resident interests. For some of these groups, more than one meeting was required in order to obtain relevant feedback. A listing of these groups and meetings is provided in Appendix 2.

In addition, meetings were held with the Regional District of Mt Waddington (RDMW) to explain the process and the final plan. The RDMW established a multi-interest public advisory board to provide feedback on the draft plan to MSRM staff before its public review in June. The advisory board also provided advice to MSRM staff and the RDMW on the final draft plan before its forwarding for approval.

Federal and provincial agencies provided advice and information during plan development. In addition, a number of provincial agencies participated as planning team members in review of the final draft plan, prior to its approval. A listing of participating provincial and federal agencies is provided in Appendix 2.

Figure 2 Generalized Planning Process for North Island Straits Coastal Plan


Confirm provincial technical team and Terms of Reference
October 2001
Develop and acquire resource data and map products
October 2001
Hold public open houses in local communities
October 2001
Commence individual discussions with interest groups, First Nations, Federal agencies and local government
November 2001 – February 2002
Develop and refine draft planning unit recommendations. Review with interest groups, participating First Nations, local advisory board.
March – June 2002
Hold public open houses to present draft plan to local communities and stakeholders
June 2002
Plan revisions
August 2002
Complete socioeconomic and environmental assessment
September 2002
Provide formal opportunities for plan review to First Nations and local government
October 2002
Complete final plan revisions as necessary
October 2002
Plan approval and sign-off by Government
November 2002

Ten First Nations have asserted traditional territories in the NIS Plan Area. A presentation was made to nine of these First Nations at their general assembly in December 2001. Financial support was offered for direct participation with provincial staff in technical planning within their territories. In addition, a number of follow-up meetings were held with individual First Nations to discuss their involvement. However, only the Tlowitsis First Nation directly participated in the review and refinement of draft planning recommendations for units in their traditional territory. The Gwawaenuk First Nation undertook a preliminary review of draft Plan recommendations near the end of the process, through a funding agreement with MSRM. In the absence of direct involvement or response from other First Nations, MSRM sent a final draft plan to all First Nations, for their formal comment and response. Responses were received from the Gwawaenuk, Tsawataineuk, Namgis and Kwakiutl District Council, and have been incorporated into the Plan where possible. A listing of First Nation contacts, correspondence and discussions held with First Nations representatives during the planning process is provided in Appendix 3, and comments received on the Plan from First Nations can be found on the NIS web page on the MSRM coastal planning web site.

2 Plan Area Description

2.1 Physical and Oceanographic Features

Landscape

The landscape of the Plan Area consists of a highly indented coastline, with numerous islands and islets. Figure 3 presents a satellite image view of the plan area landscape.

The Plan Area includes three major marine passages and two long inlets. The upper or western portion of the Plan Area is dominated by the waters, beaches and islands of the Queen Charlotte Sound. The mainland side of the Sound is fully exposed to the impact of wind and waves emanating from the open Pacific, while the Vancouver Island side is more sheltered from the Sound's wind and wave action.

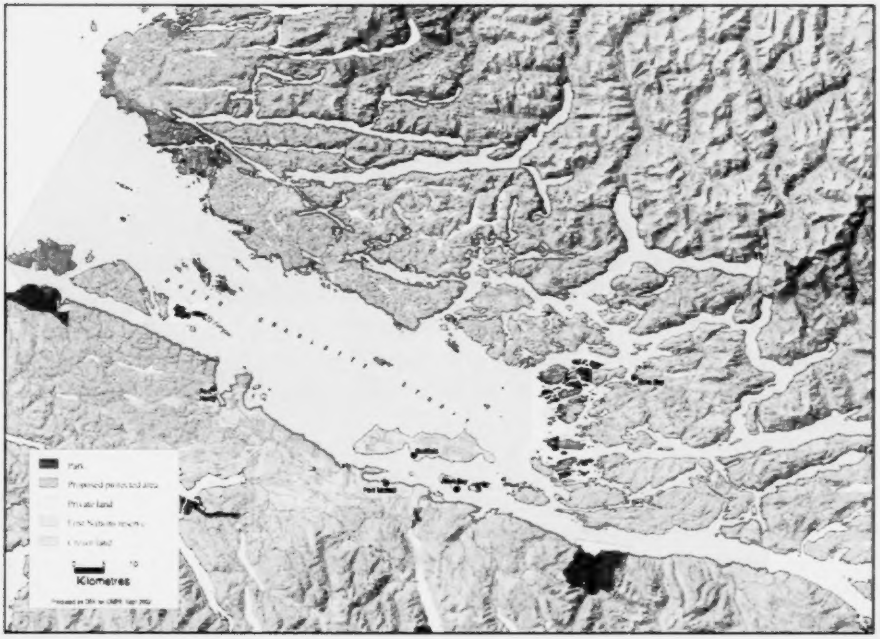
Queen Charlotte Strait occupies the central portion of the plan area. This area is a more protected, broader stretch of open water which begins at the Walker and Deserters groups of rocky islands, and ends to the east in the Broughton Archipelago complex. The Archipelago is composed of several major islands and narrow passages, along with hundreds of smaller islands, islets and rocks.

The lower, or eastern portion of the plan area contains the waters of Johnstone Strait, which follows the Vancouver Island shoreline south to the Strait of Georgia.

East of Johnstone Strait and the Broughton Archipelago lie Kingcome and Knight Inlets, both long, narrow fjords, fed by rivers originating in ice fields of the Coast Ranges. Knight Inlet extends almost 100 km further inland beyond the boundary of the NIS plan area.

Topographic diversity is characteristic of the uplands surrounding these water bodies. The Vancouver Island landscape ranges from low elevation Nahwitti Lowlands in the west to the high elevation Northern Island Mountains, including Mt. Tsitka (1652 m) and Mt. Palmerston (1634 m). On the mainland coast, the Coast Ranges provide rugged, steep topography with comparable elevation. Steep sided fjords carved out by advancing glaciers predominate on this side of the Plan Area. The numerous island complexes and groups, including the Broughton Archipelago, vary in topography from rugged to low relief landscapes.

Figure 3 Topography and Land Use Patterns in the NIS area



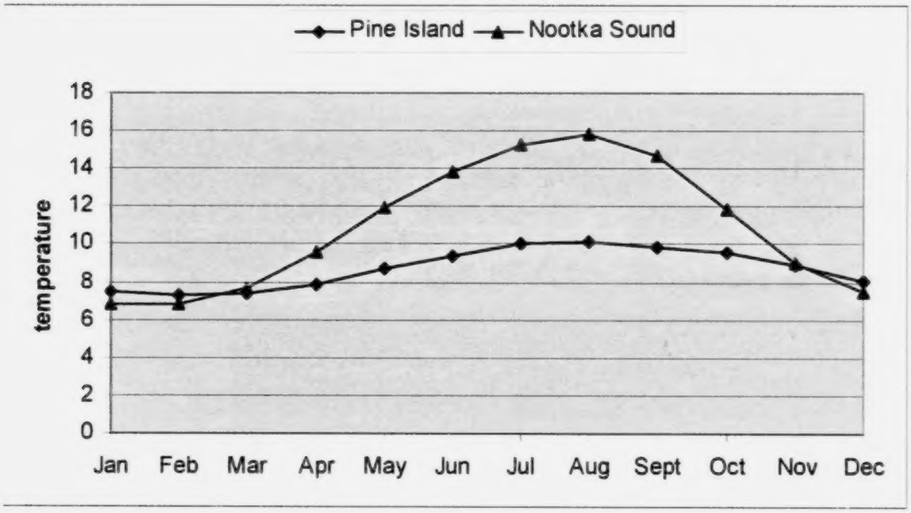
Drainage

The Vancouver Island stream systems entering the plan area tend to flow throughout the year, with peak flows normally occurring during the winter due to winter precipitation. On the mainland side, streams are largely fed by Coast Range ice caps and snow melt and are subject to high spring flows in spring. In constrained areas such as the narrow inlets, this can result in layers of fresh water over saltwater within the marine environment. Even where not constrained by inlets, outflows from major rivers such as the Nimpkish can have strong impacts on the salinity of the seawater near their estuaries.

Climate

The Plan Area climate is characterized by year-round cool, moderate temperatures and abundant rainfall. Summers are cool and wet, while winters are relatively mild due to the moderating influence of the ocean. Environment Canada weather stations within the plan area indicate January average monthly temperatures of approximately 3°C, with moderately higher July temperatures of 13°C. Records indicate the easterly, more protected areas are slightly warmer and dryer than those in the west. Long term data of sea surface temperature available from the Pine Island light station, (Figure 4) located in the northern entrance of Queen Charlotte Strait, show that seasonal variation is minimal when compared to the more exposed western shores of Nootka Sound.

Figure 4: Mean monthly sea surface temperatures at west coast light house stations



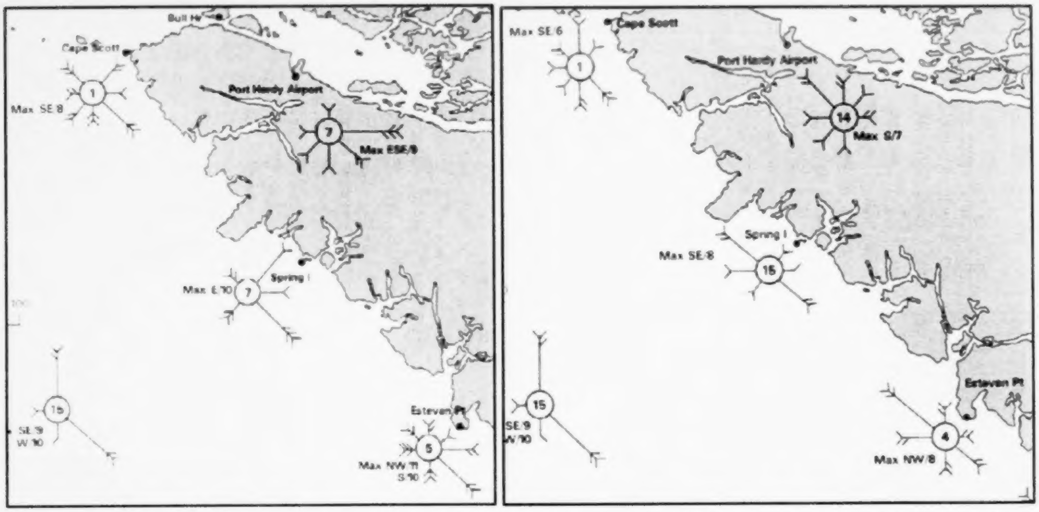
Annual precipitation ranges from 2,189 mm per year at Bull Harbour, decreasing to 1,870 mm in Port Hardy and 1,609mm at Alert Bay. Although winter months are the wettest, significant precipitation also falls year-round. A small proportion of the annual precipitation falls as snow. Snow and freezing temperatures are not as severe or as long-lasting as in inland or higher elevation areas.

Fog is relatively common in the Plan Area during the warmer months. Although fog has limited impact on most natural systems, it can impose constraints on human activities including transportation, tourism and recreation.

Wind and Waves / Exposure

Winds along the coast have an important influence on physical processes, by indirectly controlling local wave climates. Wind and waves also influence the timing and location of human activities in the Plan Area. Southeasterly winds are dominant in the winter and northwesterly winds in the summer (Figure 5).

Figure 5 Wind Direction and Strength January (left) and July (right).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Port Hardy Airport
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Max NW/11
S/10
Max SE/6
Cape Scott
1
Port Hardy Airport
14
Max S/7
Spring I
Max SE/8
15
15
SE/9
W/10
Esteven Pt
4
Max NW/8

Length of arrow indicates proportion of time wind comes from that direction, number of 'feathers' on arrows indicates strength of strongest wind

Three distinct exposure regimes, represent wind and wave conditions, occur in the NIS area. Queen Charlotte Sound is subject to moderate to high waves and winds, with a wind fetch of 300 to 1000 km. Its exposure ranking is high. The Queen Charlotte Strait portion is more protected, and is rated as moderate exposure. The more sheltered inner portions of the Plan Area have low fetch and low exposure regimes.

Queen Charlotte Strait is open to winds from all directions, with Environment Canada data to 1988 showing extreme wind events of up to 129 km/h reported at Bull Harbour on Hope Island during the month of January. Where the ocean shallows, particularly at the Nahwitti Bar at the northern tip of Vancouver Island , strong winds can create exceptionally-high waves, which when combined with an opposing tide can generate waves up to 4 metres in height.

Monthly averages (Figure 6) and annual summary (Figure 7) of wave data collected for the greater Queen Charlotte Sound area indicate that the majority of waves occurring in the area are between 1.5 and 2.0 meters with less than five percent reaching above four metres. These larger waves occur primarily during the winter months of December and January, typical of west coast wave patterns.

Figure 6 Monthly mean significant wave height occurrence for Queen Charlotte Sound

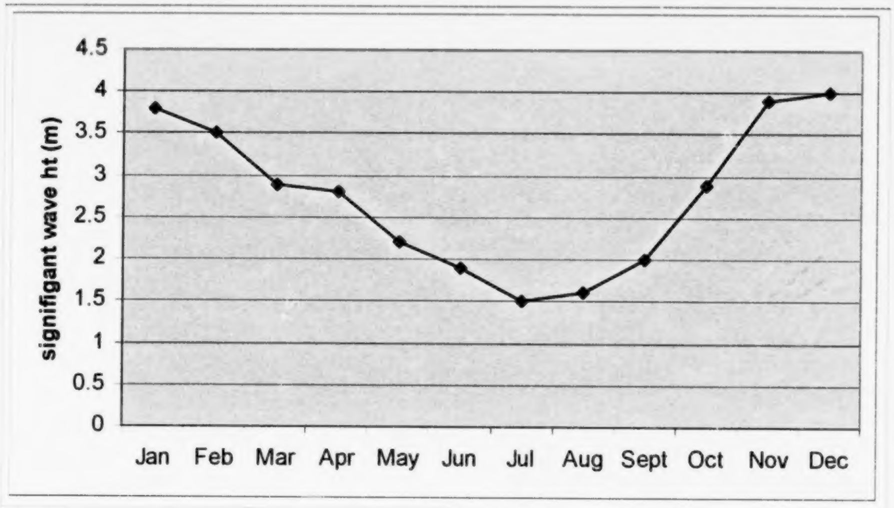
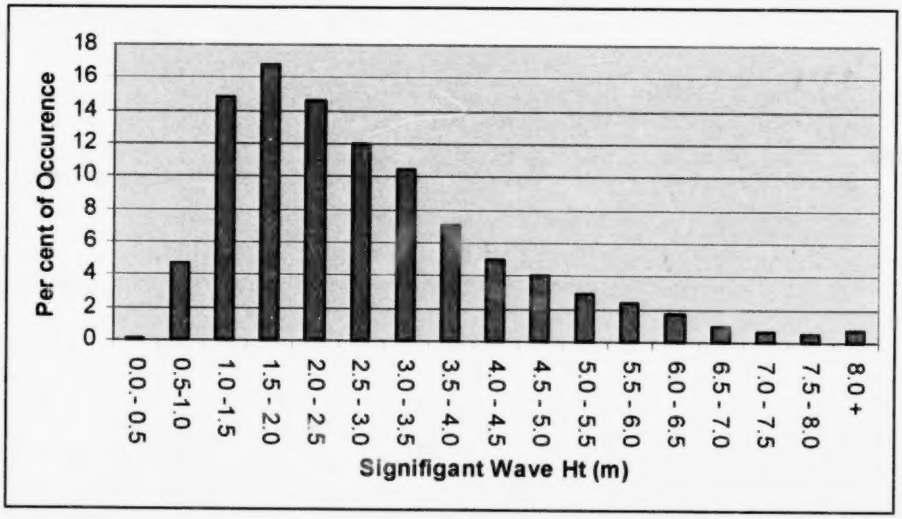


Figure 7 Annual summary of wave height occurrence and peak period for Queen Charlotte Sound



In the Broughton Archipelago, the many land bodies generally reduce wind effect, although localized funneling can produce strong winds where air masses are constricted between islands or other land bodies. The fjord inlets are generally protected from cross winds but vulnerable along their length to strong outflow winds, particularly from the province's interior in the winter. Diurnal winds, caused in summer by the heating of air over adjacent land masses, typically build to gale force on summer days, and subside in the evenings.

Currents and Tides

Tides and currents are very important to coastal marine organisms and ecosystems, and have a strong influence on human activities. Just west of the Plan Area, a strong current named the North Pacific Gyre flows southward down the Pacific Northwest coast. This current induces some flushing at the Queen

Charlotte Sound end of the Plan Area, but currents through most of the area are primarily controlled by tidal action. The narrow width of Johnstone Strait at the eastern end of the Plan Area (approximately 3 km wide) also creates strong tidal actions, affecting both biological productivity and human activities.

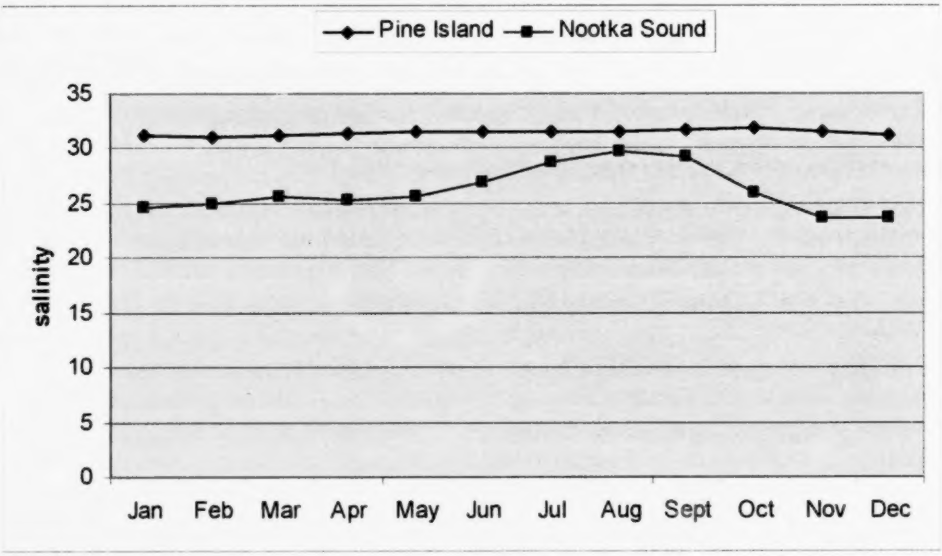
Overall, tidal fluctuations in the area are moderate, however tidal rips, whirlpools and tidal bores can all achieve velocities over 6 knots, and place names like Roaring Hole Rapids and Trembling Rock attest to the power of ocean currents. Requests for information on seasonal circulation patterns and tidal range to be included in this document were unsuccessful.

Salinity and Oxygenation

Salinity strongly affects which organisms can flourish in a given marine environment. This is of particular concern in consideration of human developments such as aquaculture, where the viability of installations may be compromised by excess freshwater runoff. By the same token, high levels of freshwater are useful at log handling sites, as a deterrent to sea worms and other wood borers.

Summaries of mean monthly sea surface salinity levels are available from a number of Pacific Coast light stations (Figure 8). Data collected at the Pine Island station, located at the entrance to Queen Charlotte Strait, are plotted against the west coast located Nootka Sound station to show differences between the areas. The Pine Island area maintains a relatively constant level of salinity compared to the seasonal variation of Nootka Sound.

Figure 8 Mean sea-surface salinity measurements made at west coast lighthouse stations



Oxygenation, a measure of how much oxygen is mixed in the seawater, is an important factor controlling the type and abundance of sea life. Most of the fish and other harvests taken from the sea require good oxygenation levels, while places which have very low oxygen levels (anaerobic) are considered relatively impoverished in terms of biological productivity. Strong tidal action provides relatively good mixing of water, and good levels of oxygenation across most of the NIS. The Nahwitti Bar, an underwater sill at the entrance of Queen Charlotte Sound forces water cold water upward, causing a mixing action which increases oxygenation, and is a key contributor to the biological richness of adjacent areas. The fjords, and some of the northern embayments such as Drury Inlet, may have reduced oxygenation levels due to limited mixing.

Shore Zone Habitats

Shore zone habitats of the Plan Area range from high energy, open ocean conditions to sheltered inlets. Coastal nearshore habitats that are generally considered to have the highest ecological significance are estuaries, salt marshes, sea grass beds and tidal flats, canopy kelp beds, subtidal rocky reefs and localized nutrient-rich upwelling areas.

Estuaries and associated salt marshes, sea grass beds and tidal flats are located at the heads of mainland inlets and along Vancouver Island where streams enter the ocean. While estuaries typically have a low diversity of planktonic and benthic species that can tolerate fluctuating salinity regimes, those species that are present tend to be abundant. Wildlife and fish species are attracted to this abundant food source.

Intertidal and shallow subtidal rocky reefs provide a highly complex bottom type that is important for commercial ground fish, such as lingcod and some rockfish. They also provide a diverse habitat for micro- and macro-algae, benthic invertebrates and many species of non-commercial fish. Based on the coastal geology and maps of bathymetry, the highest concentrations of these reefs to be found are around the Broughton Archipelago and from Nigei/Gordon Islands across to the Deserters and Walker Group.

Canopy kelp beds are generally located along exposed and semi-exposed coastlines, and in areas of upwelling or high current channels where nutrient levels are high and a rocky substrate is available. The ecosystems associated with canopy kelp beds are highly productive and provide important habitats for many fish and invertebrate species including spawning herring. The shoreline characteristics and associated habitat indicate a relatively even distribution of sandy, mud-covered and rocky or hard substrate types.

2.2 Biological Features

Marine Plants

Marine plant groups consist of the microscopic marine floating algae or "phytoplankton", the marine vascular plants or "sea grasses," and marine attached algae or "seaweeds".

Phytoplankton provide the basis of the ocean food web. These minute, single celled plants are eaten by zooplankton which in turn are the food for planktivorous fish, vertebrates such as herring, and invertebrates such as clams, sea anemones and other sea creatures. They are present in all of the marine and estuarine waters of the North Island Straits, and their abundance varies seasonally with the availability of light and nutrients.

When nutrients and light are optimal, high concentrations of phytoplankton known as "blooms" may occur and may colour the water red, brown or green (e.g. "red tide"). Some species produce potent toxins that are liberated when the algae are eaten. Other species kill without toxins, such as species with serrated edge spines that lodge in fish gill tissues. In the case of shellfish, these blooms can be a seasonal public health hazard. These types of harmful blooms have affected salmon aquaculture operations in a number of channels in the Broughton Archipelago.

Eelgrass is the main marine vascular plant in the NIS Plan Area. Other, much less commonly found species of sea grass are an introduced eelgrass species and surf grass. Eelgrass grows in underwater meadows or "beds", rooted in a fine sand substrate. These beds are most commonly found in protected waters in the lower intertidal and shallow sub tidal zones and are common at the heads of many inlets. Eelgrass beds provide critical habitat for a variety of species including geese, swans and ducks, crab, herring, and juvenile salmon. Eelgrass beds also play an important role in stabilizing the substrate.

The size and shape of beds may change seasonally or between years. They are typically shallow rooted and easily dislodged by a range of human activities. Natural factors may also impact the growth of eelgrass, such as strong currents, variable substrate and severe storms. Infestation of a parasitic slime fungus called "wasting disease" is also a potential natural threat. Eelgrass is recognized as critical fish habitat in the coastal ecosystem. DFO does not allow development that might destroy eelgrass beds to proceed unless it is shown that compensatory habitat will be created.

Significant beds can be found in the North Island Straits at the heads of the inlets along the east side of Vancouver Island in Hardy Bay, Rupert Bay and the Nimpkish River estuary. Other smaller eelgrass beds have been mapped along the shores of Malcolm, Harbledown, Turnour, Eden, Insect and Baker Islands and other of the small islands in Blackfish Sound.

The predominantly rocky shoreline of the NIS area supports a rich biota of attached marine algae or "seaweeds". Seaweeds absorb nutrients throughout the entire plant surface and attach to the surface of rocks using a "holdfast". The three main groups of seaweeds are browns, greens and reds, reflecting differing abilities to absorb light. The green seaweeds typically occupy the upper intertidal area, while the brown seaweeds are found in the lower intertidal and the reds in the lower intertidal to sub tidal waters.

A group of brown seaweeds known as "kelp" are among the most conspicuous and abundant seaweeds on the BC coast. Kelp can form extensive underwater "forest like" stands that support rich and diverse communities of marine fish, invertebrates and mammals. The main kelp species are the giant kelp and bull kelp.

The NIS Plan Area has some of the most extensive kelp beds in the province. Beds are almost continuous along the shore between Port McNeill and Port Hardy, along the shores of the islands on the south side of Gordon Channel, and along the mainland shore in the area of Blunden Harbour. Smaller beds exist throughout the exposed outer coasts of the region. The size and shape of kelp beds change seasonally and between years due to strong currents and storms. They may also be dislodged by a range of human activities. The growth of both giant and bull kelp is restricted in the protected inlets by low salinity and, at times, higher water temperatures. Grazing by urchins and other herbivorous marine invertebrates can also limit the size of kelp beds.

Shellfish and Invertebrates

The Plan Area contains a variety of shellfish and invertebrate species that are harvested for commercial, recreational and First Nations use. Intertidal clams are the most commonly harvested shellfish, including littleneck, manila and butter clams. Clams generally occupy mixed substrates of gravel, sand, mud and shell in the intertidal zone. Significant concentrations of intertidal clam beaches are found along the north side of Nigei and Hope Islands, the Burdwood Island group, the Walker group of Islands and in Clio Channel.

Geoduck clams are large sub tidal clams that occupy the lower intertidal zone to depths of over 100 metres. They are found beneath sand, silt, gravel and other soft substrates and are the focus of a lucrative harvest by commercial divers. The geoduck fishery is managed on a three year rotational basis. The precise location of geoduck fishing areas is maintained in confidence by DFO.

The NIS area waters are generally too cold for natural reproduction of oysters, although there are locations of high capability for commercial oyster culture.

The predominant crab species is the Dungeness crab, found to depths of 100 metres in moderate to strong current areas with sandy bottoms. They are abundant in estuaries as well as more exposed areas. They are usually fished by trap and are highly valued for commercial fishery as well as recreational and First Nation fishery purposes. Important commercial crab areas are found along Havannah Channel, Cracroft Inlet, Greenway Sound, Cypress Harbour, and Kingcome Inlet.

Several species of shrimp are found in Plan Area waters. They are harvested recreationally by traps, and in the commercial fishery by trawl gear. Shrimp are generally found in bottom habitats, although some species range throughout the water column. Shrimp spawn in autumn or early winter.

Prawns are the largest and most commercially lucrative of the Pacific coast shrimp species. They are primarily bottom dwellers, with typical habitat including the steeply sloping fjord inlets of the Plan Area to depths of 400 metres. They are commercially fished using traps set from boats. Important shrimp and prawn fishing areas in the Plan Area are Greenway Sound, Cypress Harbour, Kingcome Inlet, Wakeman Sound and Boat Bay.

Sea urchins are also found in the Plan Area, generally in shallow areas with rocky substrates, moderate wave exposure and moderate to strong currents. . Urchins graze extensively on algae, which in some locations results in drastic reduction of kelp and other seaweed beds. Urchins are commercially harvested by divers and processed for roe. The Queen Charlotte Strait – Johnstone Strait region is one of two principal fishing regions for the harvest of green urchins; important urchin areas are found along North Malcolm Island and in Cormorant Channel.

There are a number of sea cucumber species in the NIS area, although the giant red (California) sea cucumber is the largest and the only one commercially harvested. It is found from the intertidal zone to about 250 metres below the water surface, on a variety of substrate and current conditions. Sea cucumbers are harvested by divers, usually during autumn and winter, and are an important food resource to First Nations. Commercial harvesting is presently limited by DFO due to lack of conservation information.

A number of beaches in the Plan Area are subject to seasonal and permanent closures for shellfish harvesting. These closures may occur as a result of sanitary conditions, as well as marine toxins such as red tide. Information on these areas may be found at:

http://www.pac.dfo-mpo.gc.ca/ops/fm/shellfish/closures/area12/area_12.htm

Salmon and Other Finfish

For several centuries, salmon have been of key importance to residents of the NIS Area. In earlier times, salmon was the staple food of First Nations, as well as a key trade item. It remains an important part of the daily diet of both First Nations and other local residents to this day. Salmon abundance sparked a fishing and cannery boom across the area, beginning in the late 1800s. Although stocks have dramatically declined, these salmon resources continue to support commercial, sport and First Nations food fisheries in the Plan Area.

All BC salmon species (coho, sockeye, spring, chum, pink and steelhead) are represented in streams entering the Plan Area. There are approximately 92 gazetted salmon-bearing streams, and at least 25 known but not gazetted in the Plan Area. Streams entering from Vancouver Island and the Mainland are generally short, providing a limited amount of spawning channel. However there are very significant runs in the Nimpkish and Tsitika as well as in the Kingcome, Ahta, and Wakeman systems. The short stream length and limited watershed area of the region's smaller islands make them generally unsuited to salmon spawning. In addition to salmon that spawn in local streams and enhancement hatcheries, other major Pacific salmon populations migrate through the NIS waters.

Ground fish in the Plan Area include halibut, lingcod, rockcod and flatfish (sole). These species are most abundant in the outer, exposed waters of Queen Charlotte Sound, in select locations around the Broughton Archipelago, and in a band stretching from the Vancouver Island shoreline south of Fort Rupert to Malcolm and Hanson Islands. Ground fish are important for commercial, recreational and First Nation fisheries as they provide a year round catch; this contributes significantly to the BC fishing industry through year round employment in both the processing and harvesting sectors. Declining rockfish stocks have resulted in announcement by DFO of a rockfish conservation strategy, which may close the rockfishery in a number of locations in the Plan Area pending population recovery.

Herring are an important fishery in the Plan Area. Currently there are three major commercial herring fisheries: spawn on kelp, roe-herring, and food and bait. The spawn-on-kelp fishery is primarily conducted by First Nations to develop product destined for the large Asian market. Herring spawn on a variety of substrates, including algae and eelgrass in the intertidal and shallow subtidal zones, primarily in semi-protected areas during the month of March. Herring also spawn on a variety of man-made structures present in the water, and government approvals for placement of structures often restrict activities during the herring spawn period. Concentrated herring spawn shoreline areas are found in Kingcome Inlet and in the Thompson Sound area. Along with other species such as sand lance and eulachon, herring represent an important food source for pacific salmon.

Eulachon spawn in larger rivers and migrate offshore to feed for 2 to 5 years before returning to spawn, generally from mid-March to mid-May. They are a culturally important species and a highly regarded food fishery for First Nations. Eulachon are an important food source for other marine fish, mammals and birds at various stages of their life cycle. They also support small commercial fisheries on the Fraser River. Within their range of Northern California to the Bering Sea, eulachon spawn only in 30 – 40 rivers about 15 of them in BC. Spawning areas tend to have distinct spring floods and glacial headwaters. Knight Inlet is a significant spawning area for eulachon in the NIS Plan Area.

Since 1994 declines in eulachon runs have been noted. Although the exact causes of the decline are unknown changes in habitat, the warming of the ocean climate, increased marine mammal predation and bycatch from offshore trawl fisheries are all cited as contributing factors.

Marine Mammals

The NIS area is a critically important habitat for several species of large marine mammals, including the Orca or "killer whale." Robson Bight, along the shores of Johnstone Strait, is one of the most important Orca areas in the world. Species also congregate in Goletas Channel and Queen Charlotte Strait before passing through Blackfish Sound into Johnson Strait. The areas around Swanson and Hansen Islands and Johnstone Strait are rated as prime habitat for Orcas, while the more open western portions of the NIS are rated prime for Grey and Humpback whales. The NIS planning region is also inhabited by the Minke Whale. Although less is known of the seasonal movements of this solitary species it is generally believed they shift northward during the summer months and southward during the winter.

High-capability habitat exists in much of the NIS for Dall and Harbour porpoises. Harbour porpoises can be found in the nearshore shallower waters, frequenting bays, harbours, estuaries and river mouths with depths shallower than 20 metres. Dall porpoises prefer deeper ocean waters where they feed primarily on squid, fish and crustaceans.

Seals and sea lions also find both feeding grounds and secluded beaching areas in the NIS. Seal haul-out locations include Surge Islets, Penfold Islands, East Tree Islets and Deserters and Walker Groups. The Millar group and Harris Island are the site of significant sea-lion haul-outs. Typically each sea lion will occupy two or more locations making population estimates difficult. The use of terrestrial areas for reproduction by some marine species is also well-known. Seal and sea lion populations have been increasing in BC's coastal waters in recent years.

Birds

The upland, foreshore, nearshore and open ocean habitats of the Plan Area accommodate an exceptionally large assortment of bird species. These habitats support resident populations as well as migratory species. The Plan Area is located along migration routes, it affords sheltered waterways, marine food sources, and areas for breeding, wintering, and staging and migration.

Significant bird colonies in the Plan Area are listed in Table 1. The Queen Charlotte Sound and Strait portions of the Plan Area are particularly important, with large concentrations of alcids and cormorants.

The Storm, Pine and Buckle Island groups in Queen Charlotte Sound have been set aside as a provincial Ecological Reserve due to their significance for breeding birds.

A number of "areas of interest" have been identified by the Canadian Wildlife Service in the Plan Area. These areas represent major seabird breeding colonies and feeding areas for resident and migratory birds.

Table 1 Bird Colonies in the North Island Straits Coastal Plan Area

Unit	Colony Location	Protected Status	Description
14 East Broughton	Seabreeze Island -Rock		Black Oyster catcher, Glaucous-winged Gull
14 East Broughton	Ridge Rocks		Black Oyster catcher, Glaucous-winged Gull
17 Tribune North	Deep Sea Bluff		Pelagic Cormorant, Glaucous-winged Gull and Pigeon Guillemot
42 Cormorant Channel	Plumper Islands	Cormorant Channel Provincial Park	Pigeon Guillemot
42 Cormorant Channel	Stephenson Islet	Cormorant Channel Provincial Park	Black Oystercatcher, Glaucous–winged Gull and Pigeon Guillemot
47 Nigei Gordon	Doyle Island rocks		Glaucous-winged Gull
47 Nigei Gordon	Crane Islands	God's Pocket Marine Park	Glaucous-winged Gull
53 Deserters-Walker	Bleach Rock, Deserters Island, Joan Island	Deserters-Walker candidate protection area	Black Oystercatcher, Glaucous-winged Gull
53 Deserters-Walker	Barry Islet	Barry Islet candidate protection area	Glaucous-winged Gull
54 Storm-Pine-Buckle	Herbert Islands-	Duke of Edinburgh Ecological Reserve	Fork-tailed and Leach's Storm-petrel, Cassin's Auklet, Black Oystercatcher, Pigeon Guillemot
54 Storm-Pine-Buckle	Bright Island	Duke of Edinburgh Ecological Reserve	Fork-tailed and Leach's Storm-petrel, Cassin's Auklet, Pelagic Cormorant, Black Oystercatcher, Glaucous-winged Gull, Pigeon Guillemot
54 Storm-Pine-Buckle	Pine Island	Duke of Edinburgh Ecological Reserve	Rhinoceros Auklet ,Leach's Storm-petrel, Pigeon Guillemot
54 Storm-Pine-Buckle	Tree Islets	Duke of Edinburgh Ecological Reserve	Fork-tailed and Leach's Storm-petrel, Cassin's Auklet, Rhinoceros Auklet, Black Oystercatcher, Glaucous-winged Gull, Pigeon Guillemot
54 Storm-Pine-Buckle	Storm Islands	Duke of Edinburgh Ecological Reserve	Fork-tailed and Leach's Storm-petrel, Rhinoceros Auklet, Cassin's Auklet, Black Oystercatcher, Glaucous-winged Gull, Pigeon Guillemot
54 Storm-Pine-Buckle	Reid Islets	Duke of Edinburgh Ecological Reserve	Leach's Storm-petrel, Cassin's Auklet, Black Oystercatcher, Glaucous-winged Gull, Pigeon Guillemot
54 Storm-Pine-Buckle	Naiad Islets	Duke of Edinburgh Ecological Reserve	Black Oystercatcher, Glaucous-winged Gull, Pigeon Guillemot
55 Cape Caution	Harris Island, Rogers Islands		Black Oystercatcher, Glaucous-winged Gull, Pigeon Guillemot
55 Cape Caution	Emily Group		Black Oystercatcher, Pigeon Guillemot
55 Cape Caution	Bremner Islet		Pelagic Cormorant, Balck Oystercatcher,

Unit	Colony Location	Protected Status	Description
			Glaucous-winged Gull, Pigeon Guillemot
55 Cape Caution	Annie Rocks		Black Oystercatcher, Glaucous-winged Gull
57 Numas Island	Staples Islet		Black Oyster Catcher, Glaucous-winged Gull
58 Foster	Penfold Islet		Black Oyster catcher, Glaucous-winged Gull
58 Foster	Foster Island, Twin Islets		Black Oyster catcher, Glaucous-winged Gull and Pigeon Guillemot

Source: Canadian Wildlife Service (2002)

Many migrating bird species on the Pacific Flyway pause briefly en route in the NIS for rest or feeding, usually in the fall and spring. For management purposes, these species require continued access to sheltered waterways and food sources, most commonly in estuaries and marshes. The longer-term visitors and resident species generally have greater management requirements, such as protection of specific breeding areas or habitats, and controls over human use, activity or disturbance at critical times of the year.

Red and Blue Listed Species

A number of locations in the Plan Area are important habitat for "red or blue-listed" marine birds, mammals and plants. This classification is given by the provincial government to species that are considered by scientists as being at risk due to declining populations or habitats due to human activities. Red-listed species are endangered, and facing imminent risk of extirpation or extinction. Blue-listed species are threatened, meaning they are likely to become endangered if limiting conditions are not removed. Provincial laws prevent human development or activity on or near the habitat of red and blue-listed species. Red and blue-listed marine species in the Plan Area are shown in Table 2

Table 2 Red and Blue listed species in the North Island Straits Coastal Plan Area

Common Name/ Scientific Name	Status	Location	Habitat
GREY WHALE Eschrichtius robustus	BLUE	Hardy Bay	Nearshore
KILLER WHALE Orcinus orca		Throughout Queen Charlotte and Johnstone Straits	Marine
N.E Pacific Resident Population	RED		
N.E Pacific Offshore Population	BLUE		
West Coast Transient Population	RED		
HUMPBACK WHALE Metaptera novaeangliae	BLUE	Throughout Queen Charlotte and Johnstone Straits	Marine
NORTHERN SEA LION Eumetopias jubatus	RED	Millar Group, Ashby Point	Intertidal
CASSIN'S AUKLET Ptychoramphus aleuticus	BLUE	Bright Island, Herbert Island, Storm Islands, Reid Islets, Tree Islets	Marine & Terrestrial
SURF SCOTER Melanitta perspicillata	BLUE	Throughout open water straits and protected bays, harbours, lagoons	Marine Nearshore and Shorelines
EULACHON Thaleichthys pacificus	BLUE		Marine Nearshore and Estuaries

Common Name/ Scientific Name	Status	Location	Habitat
ROUND TINY INARTICULATE DISCINISCA LAMP SHELL Discinisca lamellosa	RED	Goletas Channel, South Of Hope Island, Numas Islands, Labouchere Passage	Marine Bottom
20 TENTACLED THYONIDIUM SEA CUCUMBER Thyonidium kurilensis	RED	Cormorant Channel	Marine Bottom
TINY WHITE BLACK-SPOTTED CHITON Hanleyella oldroydi	RED	Queen Charlotte Strait, off Cape James, Hope Island	Marine Bottom
POMEGRANATE AEOLID Cuthona punicea	RED	Plumper Islands(not added to unit references)	Marine
No common name Tayloriella Divaricata	RED	Broken Islands	Marine Bottom
No common name Leptonematella fasciculata	RED	Felix Bay, Call Inlet	Subtidal Bottom
ARCTIC COOKIE STAR Ceramaster arcticus	RED	Slingsby Channel, Outer Narrows	Marine Bottom
RASPBERRY HYDROID Corymorpha species	RED	Stubbs Island, offshore, Stephensen Islet	Marine Bottom
No common name Hollenbergia nigricans	RED	Hedley Islands	Marine Bottom
No common name Dictyoneuropsis reticulata	RED	Goletas Channel, Off Hope Island, Roller Bay, Hope Island	Marine Subtidal
No common name Laminaria sinclairii	RED	Plover Island, Roller Bay, Hope Island	Marine Bottom
No common name Myriogramme pulchra	RED	Hope Island, Southwest Shore	Marine Bottom
Two-Edged Water Starwort Callitriche Heterophylla ssp Heterophylla	Blue	Queen Charlotte Strait , Seymour Inlet	Lowland
Bog Rush Juncus Stygius	Blue	Port McNeill through to Cape Scott, Nigei & Hope Island	Terrestrial Lowland
Queen Charlotte Butterweed Senecio Moresbiensis	Blue	Port McNeill through to Cape Scott, Nigei & Hope Island	Lowland to Alpine
Keens's Long Eared Myotis Myotis Keenii	Red	Coastal forest habitat, tree cavities, rock crevices, small caves	Terrestrial Lowland
Menzies' Burnett Sanguisorba Menziesii	Blue	Goletas Channel, Walker/Deserters Group, Port McNeill	Terrestrial Lowland
. Gmelin's Sedge Carex Gmelinii	Blue	Cape Caution, Seymour Inlet, Queen Charlotte Strait	Terrestrial Lowland

Ongoing Conservation Initiatives

The Plan Area has been the location of several site specific and large area conservation proposals by government agencies over the past few years. The NIS Plan Area was originally part of the area being addressed in the strategic-level Central Coast Land and Coastal Resource Management Plan (CCLCRMP). In preparation for that process, the provincial government in 1997 established a number of Cabinet-approved "Official Study Areas" under the provincial Protected Areas Strategy (PAS), many of which had marine components. These areas were recommended by a provincial agency Central Coast Gap Analysis Team (CCGAT).

Within the NIS Area, five "goal 1" study areas were established to address the PAS ecosystem representation goal, and 10 smaller, "goal 2" study areas were established to address the PAS goal of representing significant recreational, cultural, historical and ecological features. These areas are identified in Table 3. The intent of these proposals was to obtain public, local government and First Nation agreement to their designation for protection, after which they would be officially designated for protection purposes under provincial legislation. At this time, none of the "goal 2"areas have been advanced for legal designation, but the terrestrial or land components of three "goal 1" areas (Broughton Extension, Cape Caution, Ahta-Ahnuhati Complex), as well as Hanson Island have been placed under provincial Order-in-Council reserves for protection purposes, effectively preventing any disposition under provincial statutes until June 30, 2003 (anticipated completion date for the CCLRMP terrestrial planning process). In addition, the LRMP process is anticipated to result in designation of the terrestrial and estuary components of many of the remaining "goal 2" areas.

Table 3 PAS Official Study Areas found in the North Island Straits Coastal Plan Area

Study Area Category	Name & Marine Area (Ha)	Key Features
Goal 1	Broughton Extension 2,066 ha	High marine biodiversity & productivity; #1 recreation & tourism priority; significant First Nations cultural features & values. Outer Fjordland Ecosection
Goal 1	Cape Caution 9,166 ha	High intertidal values; grey whales; #2 recreation & tourism priority; important First Nations cultural features. Hecate Lowland Ecosection
Goal 1	Deserters & Walkers Group 4,673 ha	Very high conservation values; high seabird, sea lion and seal values; safe anchorage & scuba diving. Queen Charlotte Strait Ecosection
Goal 1	Duke of Edinburgh Extension 8,292 ha	Critical feeding grounds for nesting & migrating birds; seabird watching & ecotourism. Queen Charlotte Strait Ecosection
Goal 1	Ahnuhati Complex (Ahta River Estuary) approx. 150 ha	Significant coastal wetlands; grizzly bear conservation values; salmon values; recreational values. Northern Pacific Ranges Ecosection
Goal 2	Barry Islet 1,612 ha	Primarily conservation features: rare corals; northern sea lions; rockfish habitat & feeding area
Goal 2	Boat Bay 675 ha	Primarily recreation features: anchorages to remove whale watching pressure from Robson Bight Ecological Reserve
Goal 2	Burdwood Group 419 ha	Primarily recreation features: key sheltered anchorage; high scenic values
Goal 2	Cullen Harbour 388 ha	Primarily recreation features: key sheltered anchorage; high scenic values
Goal 2	Forward Harbour 270 ha	Primarily recreation features: safe anchorage; salmon runs ;sport fishing; waterfowl; archaeological sites; scenic views
Goal 2	Kingcome Estuary 41 ha	Primarily conservation features: coastal wetlands; waterfowl; fishery values; grizzly bear viewing
Goal 2	Numas Islands	Primarily conservation features: rhinoceros auklet colony; bird feeding

Study Area Category	Name & Marine Area (Ha)	Key Features
	458 ha	area.
Goal 2	Polkinghorne 321 ha	Primarily recreation features: safe anchorage; high scenic values
Goal 2	Seymour Estuary 75 ha	Primarily conservation features: coastal wetlands; fishery, waterfowl, cultural heritage values
Goal 2	Wakeman Estuary 125 ha	Primarily conservation features: coastal wetlands; waterfowl, salmon, sport fishery values

Source: Revised Study Areas for the Central Coast LRMP Area (May 1997)

Portions of the NIS Plan Area have also been assessed by Parks Canada as potential National Marine Conservation Areas (NMCAs) on Canada's Pacific Coast under the federal *National Marine Conservation Areas Act (2002)*. In June 1999, Parks Canada officially identified two large areas as candidates for representation of the Queen Charlotte Sound marine ecosystem. The first area takes in all of the NIS Plan Area from Hardy Bay across the Queen Charlotte Strait, to Cape Caution and the Queen Charlotte Sound. This area (referred to as the Queen Charlotte Strait proposal) covers approximately 1,500 sq. km. The second area is referred to as the Blackfish Sound proposal, and encompasses all the NIS Plan Area eastward from the tip of Malcolm Island, excluding Cormorant Channel (approximately 1,500 sq. km). These proposals are still under preliminary discussion with local governments, First Nations and stakeholders. In order for any of these proposals to become legislated NMCAs, Parks Canada would be required to undertake feasibility studies and obtain provincial government agreement to transfer jurisdiction of provincial foreshore and seabed, as well as any provincially-administered tenures or resources.

The scope of the NIS Coastal Plan does not lend itself to making specific recommendations for new marine protected areas (MPAs). However, the Plan is able to confirm a number of foreshore and nearshore areas as candidates for further marine protection assessment. These areas are identified in individual NIS planning units, as areas over which *Land Act* "notations of interest" or reserves will be placed to limit development in the areas pending the marine protection assessment.

The final designation of these areas for marine protection, the type of protection afforded, and their specific boundaries is intended to occur through regional implementation of the federal-provincial Marine Protected Areas Strategy. Implementation is anticipated to occur through the Central Coast integrated oceans management process being established by DFO under the 2002 Canada Oceans Strategy. This latter process will lead to specific consultations with affected local governments, First Nations and stakeholder groups. Areas recommended for *Land Act* notation of interest or reserve are summarized in Section 5.0 of the Plan.

2.3 Coastal Use and Activity Pattern

The present coastal land use and activity pattern is varied and encompasses a wide range of uses and activities throughout the entire Plan Area.

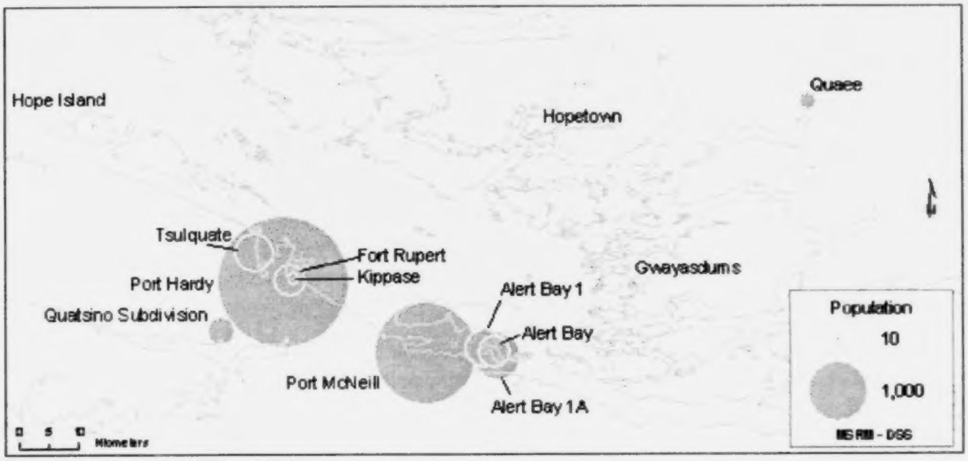
Settlement

The majority of the Plan Area's 13,100 population lives on Vancouver Island at Port Hardy (now including Fort Rupert) and Port McNeill. Smaller permanent and seasonal communities include Sointula (Malcolm Island), Alert Bay (Cormorant Island), Hyde Creek, Telegraph Cove, and Echo Bay. A number of First Nations communities are also located on adjacent islands. Figure 9 identifies these communities and their relative populations.

Along with these principal communities, a few small, semi-permanent communities have developed on float structures or onshore in protected locations. They tend to be based around commercial resorts, lodges and marinas such as Greenway Sound and God's Pocket.

Permanent and transient floating homes and barge camps can be found in remote areas. These are usually in sheltered bays and inlets, and associated with temporary timber harvesting operations or with fish farming operations.

Figure 9: Population of North Island Straits Municipalities and Indian Reserves



First Nations

Ten First Nations of the Kwakwa'ka'wakw-speaking peoples have Indian Reserves within their asserted traditional territories in the NIS Plan Area. In most cases, First Nations were relocated by the federal government from their traditional villages and seasonal camps to the larger communities of Port Hardy and Alert Bay. There is a strong interest by First Nations in resettlement of former village sites. Outside of the major municipalities, the larger First Nations communities are on reserves at Hopetown, Kingcome Estuary and Wakeman Estuary.

First Nations continue to exercise legal Aboriginal rights which include fishing, shellfish harvesting and marine plant collection. Many of these activities take place on a seasonal basis and in locations reflecting traditional divisions of management within and between specific First Nations. Aboriginal food harvesting continues to be of huge economic significance to First Nations households, supplementing other incomes and food supplies. For example, the Gwawaenuk First Nation members all have specific resource use areas and are highly dependent on marine resources for food, cultural use, and to subsidize family income. Hopetown residents share their marine resource harvest with off-reserve families. Economic development aspirations are tempered in this area by cultural and ecological concerns, and there is major concern by the Gwawaenuk, Twawataineuk and Namgis about coastal uses that can cause contamination or reduction of harvestable marine resources.

Forestry

Provincial information identifies 139 log handling and storage tenures in the Plan Area. The harbours of Port McNeill, Port Hardy and Beaver Cove have major facilities for log handling associated with permanent shore based operations and infrastructure. Outside these areas, most tenured sites are used during conventional logging operations for crew and equipment landings and log transfer to water-borne booms or other marine transport. These sites are concentrated in the eastern side of the NIS, mainly near the larger islands or on mainland inlets. The majority of tenured sites are currently inactive, and in many areas, logging is not anticipated for several decades.

The North Island Straits Plan Area has a very high proportion of timber that is readily harvestable or a high proportion of operable timber. Most of the forest lands surrounding the NIS Area are under visual management with the exception of the remote inlets. The visually sensitive areas dictate increasing use of alternate silviculture systems and harvesting methods such as helicopter based harvesting, and the subsequent need to provide heli log water drop sites. Heli logging operations are common along the steep sided slopes throughout the Plan Area. These operations use adjacent deep water as heli drop sites to facilitate transport of logs. Heli log drop sites are active only for brief, intermittent periods.

Due to the high operability of the Plan Area, forestry activities cover the entire area with the exception of the small coastal islands with no timber or scrub timber. Current harvesting and silviculture activities are concentrated on the Coast mainland, Gilford, Broughton, North Broughton, West Cracroft, East Cracroft, Turnour, Harbledown and Malcolm Islands.

Aquaculture

There are 41 finfish tenures in the Plan Area, all for salmon farming. A large cluster of operations in the Broughton Archipelago area is among the largest in the province. A second group of operations lies in an arc across the entrance to Queen Charlotte Strait from Port Hardy to the mainland coast.

The high number of finfish production facilities is related to biological and oceanographic conditions. Finfish aquaculture sites generally require sufficient depth and current flow, high water quality and locations sheltered from high wind and storm events. The provincial government has siting criteria in place that address other conditions and potential conflicts, such as distance from shellfish beds, predators and migratory birds. Finfish farms usually require associated on-water structures for housing and storage.

Although the Plan Area has favourable biological and oceanographic conditions for beach and off bottom shellfish culture, there has been little interest or activity for this type of aquaculture. Two shellfish tenures were originally issued at Booker Lagoon and Harbledown Island, but were abandoned for economic and other reasons. Shellfish production sites usually require adjacent upland or floating structures.

Tourism and Recreation

Northern Vancouver Island is still remote from the mainstream of British Columbia's tourism industry, and regionally the industry continues to lag behind forestry in terms of employment and economic contribution. However, over the last decade the range of tourism activities and products in the NIS Area has broadened, and the sector has grown in overall significance both as an employer and contributor to the regional economy. Communities in the region continue to view tourism and recreation as a means to bolster the local economy.

Tourism products and recreation activities in the plan area include: sport fishing, wildlife viewing, sailing and cruising, diving and sea kayaking. Road touring is an important tourism product for communities adjacent to the Plan Area. Cruise ships bound for Alaska and Vancouver transit the area but do not dock. All of these activities are seasonal, occurring primarily from May to October. The majority of tourism products and recreational activities in the Plan Area are closely linked to resources of the shoreline and nearshore. These include beaches, boat launches, campsites, sheltered anchorage and boat havens, reefs and other diving areas. Sport fishing remains a very important part of the region's tourism economy. While many businesses in this sector have diversified their product offerings, the health of this sector is closely linked to fish stocks and regulations. The Plan Area is world renowned for wildlife viewing, offering excellent opportunities to view orcas and grizzly bears. Wildlife viewing businesses are highly dependent on the continuing health and visibility of these key species.

Recreation and tourism in the plan area also requires facilities to provide access, transportation and use of the area. Community and privately owned wharves, docks and boat ramps are prerequisites for recreation and tourism access to the ocean. Tourism businesses and recreational users rely on shore-based businesses for shelter, fuel, accommodation, supplies, equipment, guide services and food and beverage services. Most of these support services are located in the larger communities, which serve as "gateways" to the broader Plan Area. There are several remote lodges and marinas in the NIS Area.

Fisheries

Fishing for commercial, recreational and First Nation food gathering purposes remains an important activity in the waters of the North Island Straits. Such activity occurs throughout the year, and includes the salmon, ground fish, rockfish, and herring fishery. Important shellfish and invertebrate fisheries also take place, including crab, geoduck, clam, shrimp, sea urchin and sea cucumber. In Knight Inlet, an important eulachon fishery takes place, with major cultural significance for First Nations.

Fishing activity has important implications for coastal areas and other uses. Considerable boat traffic is generated by the commercial fleet and recreational fishers, particularly during commercial season openings. Seine fishing activities often require shoreline areas for tie up. Fishing by traps or by diving requires safe distances from other marine users. Recreational fishers also require access to safe anchorages and to important fishing grounds.

Fishers require shore facilities to unload catches, service vessels and store vessels during periods of inactivity. Most shore facilities for fishing activity are found in the major settlement areas.

Energy, Minerals and Aggregate Extraction

While portions of the Plan Area have potential for oil, gas and other energy production, there been no activity since 1972, when a federal decision created a moratorium and halted all exploration and development on the coast. At present there are a few small aggregate extraction facilities on foreshore in the Plan Area, notably on the north side of Malcolm Island. In addition to a single provincial permit, just south of Fort Rupert, Shell Canada and Petro-Canada hold federal exploration permits in the Northern portion of the study area.

There are currently no coal bed methane permits/tenures on Vancouver Island. There is one experimental drilling operation currently operating in the Comox Valley under privately held oil and gas rights.

Vancouver Island is connected to the provincial electricity grid via sub-sea transmission lines. Cormorant and Malcolm Islands are also connected to Vancouver Island by submarine cable. The Broughton and mainland portion of the NIS area are not connected to the grid.

Marine Transportation

Much of the land adjacent the plan area is not accessible by road. Consequently, marine transportation is important to many of the activities in the area. In addition, the Johnstone and Queen Charlotte straits are part of the inside passage, an important route linking coastal British Columbia, Alaska, and Washington State. Log booms, barges, cruise ships, yachts, and fish boats regularly transit the Plan Area from Alaska, the Queen Charlotte Islands, Vancouver, Seattle, and elsewhere. Some parts of the Plan Area can experience considerable vessel traffic and occasional congestion, especially in the summer.

Navigation is a primary concern for marine transportation, both in the Inside Passage and in other channels. Commercial towboats move barges and log booms through much of the Plan Area. Towboat operators are concerned that aquaculture and docks should not impede navigation and marine transportation. Representatives of the towboat industry meet regularly to review tenure applications and advise the Canadian Coast Guard of any concerns.

Towboats, the commercial fishing fleet and recreational boaters require safe anchorage in bays and inlets protected from storms and'unfavourable tides. The towboat industry holds several *Land Act* Notations of Interest in the Plan Area, providing safe locations to tie-up log booms and barges. Some tenures for log handling and storage provide similar opportunities.

BC Ferries provides daily ferry service to Alert Bay, Sointula, and Port McNeill. During summer months weekly ferry service is provided from Port Hardy to Prince Rupert through the Inside and Discovery Passage routes. After September 9th northern ferry transportation is reduced to one vessel servicing only the primary communities in the area such as Prince Rupert and Bella Bella.

2.4 Community and Socio-Economic Profile

Population

All of the Plan Area communities lie within the administrative boundaries of the Mount Waddington Regional District. The RDMW includes northern Vancouver Island and extends inland on the BC mainland, well beyond the NIS boundaries.

BC Stats estimates the population of the Regional District in 2001 at about 13,100. Almost 80% of this population (about 10,400) lives within or immediately adjacent to the NIS area boundaries[2], and nearly 90 percent of the Plan Area population lives in or near the five main communities of Port Hardy, Port McNeill, Sointula, Alert Bay and Telegraph Cove.

Population in the RDMW has declined by about 11% over the 1981-2001 period, with most of this decline occurring since 1996. Primary reasons for the decline are the closure of the Island Copper mine, timber harvest reductions, and the decline in salmon fisheries and associated vessel buyback program.

Population in the NIS Plan Area increased by about 18% over the 1981-96 period, before declining during 1996-2001. The Plan Area population decline was at a slower rate than for the Regional District as a whole, primarily due to the higher proportion of First Nations whose population levels have been more stable over the 1996-2001 period.

Total aboriginal population is estimated at almost 2,500, or about 17% of total Regional District population in 1996. About 63% of First Nations people lived on reserve in 1996. Estimates for 2001 are not yet available, but data suggests the proportion of First Nations in the Plan Area is higher than in the Regional District as a whole.

Table 4, below, provides the best available estimates of First Nations population in the NIS Plan Area, and includes First Nations persons who live off-reserve.

Table 4: First Nations populations in the NIS Coastal Use Plan Area

Location	First Nation	Est. 1998 Population
Kingcome	Tsawataineuk	172
Gilford Island	Kwicksutaineuk	235
Hopetown	Gwawaenuk	27
New Vancouver	Da'naxda'xw	n/a
Hope Island	Tlatlasikwala	41
Port Hardy	Gwa-Sala Nakwaxda-Xw	595
Port Hardy	Kwakiutl	591
Village Island	Mamalilikula	228
Alert Bay	Namgis	1,406
Alert Bay	Tlowitsis	317
Total		3,612

Source: CCLCRMP Socio-Economic Base Case, Ministry of Employment and Investment, 2000.
Based on data from Indian and Northern Affairs Canada 1998.

Transportation Access and Infrastructure

Transportation access is a key factor shaping the pattern of human settlement and the economy of the NIS area. The Plan Area lies well beyond the province's main population centres and markets in southwest BC. The NIS communities on Vancouver Island are accessible, by Highway 19 to southern Vancouver

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[2] For purposes of population, economic dependency and labour force estimates, the NIS area is defined as Port Hardy, Port McNeill, Alert Bay and Census Subdivision A of the Mt. Waddington Regional District, which includes a number of unincorporated communities such as Telegraph Cove and Sointula, as well as Indian Reserves and rural areas.

Island, while the mainland side of the NIS, and the Broughton Archipelago islands are not connected to the provincial highway system. Sointula and Alert Bay are linked by daily BC Ferry service to Port McNeill and Vancouver Island. Port Hardy is the base for BC Ferries' services to the north and central coasts, and also has a deep sea port capable of handling large ships. All of the NIS communities have harbours providing moorage and landing docks for coastal barges and commercial fishing and recreational vessels.

The NIS Area is serviced by scheduled and charter air routes to a regional airport at Port Hardy, by charter service to local airports at Port McNeill and Alert Bay, and by float plane or helicopter service to outlying communities, tourism lodges and resource camps.

Community Infrastructure and Services

Most of the public and commercial infrastructure serving the NIS Plan Area is located in Port Hardy and Port McNeill, with limited services available elsewhere.

Port Hardy, with a population of almost 5,300 (including nearby Indian Reserves), is the regional centre for the area, with the bulk of accommodation, health, education, government services, retail outlets and other commercial services in the NIS area. It also has a commercial harbour, two marinas, and related marine services.

Port McNeill is the second largest community in the NIS area, with a population of about 2,800. It includes a range of commercial accommodation, health and education services, and has a harbour providing commercial and recreational moorage and related marine services.

Alert Bay on Cormorant Island, has a population of almost 1,300, including adjacent First Nations communities which account for over half of the population. The Alert Bay area provides a number of accommodation facilities, several retail outlets, moorage and related marine services.

The small communities of Sointula and Telegraph Cove also provide some limited infrastructure and services. Sointula is primarily oriented to the fishing industry, and the Telegraph Cove area has important industrial activities as well as serving as a service and staging centre for marine based tourism.

Economic Structure and Dependency

Economic dependency estimates show the relative importance of different sources of "basic" income, which is income generated by: (i) resource export industries such as forestry and mining, (ii) tourism and government sectors and (iii) sectors supplying industries (i) and (ii). Non-basic sectors include businesses (e.g. local grocery stores and other retail outlets) that serve local demand generated as a result of basic activities. Economic dependency estimates are based on labour force data.[3] The economic dependency estimates consider government as a "basic" industry.

Economic dependency data for the NIS area are presented graphically in Figure 10.[4] In general, the NIS area economy is one of the least diversified in BC.[5] The information also shows that forestry (harvesting and processing) was the single largest source of basic income (34%) in the NIS area in 1996. The income dependency on this sector is highest in the Port McNeill area (58%), which is the most forestry-dependent area in BC. The public sector appears to be the second most important source of basic income (21%) in the NIS area. This sector is the most important source of income in the Alert Bay area (44%), reflecting the importance of Band-related employment on Indian Reserves. These estimates do not take into account recently announced downsizing of provincial services.

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[3] The latest Ministry of Finance estimates are presented in *British Columbia Local Area Economic Dependencies and Impact Ratios- 1996*, May, 1999, as well as in supplementary unpublished MFCR results provided for this report.

[4] These data include communities outside the NIS area. For example, the Port Hardy area data includes Port McNeill and Telegraph Cove within the NIS area, but also several smaller communities such as Port Alice, Coal Harbour, Holberg, Quatsino, Winter Harbour, Woss Lake and Coal Harbour which are outside the Plan Area. The Alert Bay area includes Sointula and lies entirely within the NIS area.

[5] Based on a review of the economic dependency data and the "diversity indexes" estimated in *British Columbia Local Area Economic Dependencies and Impact Ratios – 1996*, op. cit.

Dependency data also show fishing and aquaculture (including related processing) as the third most important private sector source of basic income (8%) in the NIS area. Fishing is particularly important in CSD A (23%, including Sointula) and the Alert Bay area (10% of income). Aquaculture and fish processing (for both wild and farmed species) is more important in the Port Hardy area. These estimates do not include salmon harvest and fleet reductions since 1996. On the other hand, employment and income in aquaculture grow-out and related processing and other services has increased substantially since 1996.

Tourism[6] is the third largest source of basic employment income (8%) in the NIS area. Tourism income dependency is most important in the Port Hardy area (10%), in which much of the food and accommodation services are located, but it is a growth sector throughout the NIS area.

Although mining is shown as the fifth largest source income in the NIS area, this does not fully reflect closure of the Island Copper mine in Port Hardy.

Pension, investment income and transfer payments (which include Canada Pensions and Old Age Security) together comprise almost 13% of basic income in the NIS area. Transfer payments are particularly important on Indian Reserves, reflecting the lack of employment opportunities. Retirement incomes comprise a relatively low proportion of total income in the NIS area, in part due to the relative isolation and lack of services compared to other parts of BC.

First Nations Economic Dependency

BC Stats economic dependency data shows that fishing and forestry are the main private sector income sources for First Nations in the NIS area. Commercial fishing and fish processing, particularly of salmon, have been a principal source of employment for First Nations since European contact, although this has declined in recent years. Aboriginal craft arts and tourism are becoming increasingly important sources of livelihood for First Nations people. However, government services (primarily Band-related), accounts for over half of total employment and income. Aboriginal food harvesting is an important component of the income stream for First Nation households in the Plan Area, particularly for those living in the more isolated First Nations communities in the Plan Area.

Rates of unemployment that are significantly higher than provincial and regional averages, and the proportion of Band-related employment both reflect the lack of private sector employment opportunities. First Nations also tend to have higher rates of poverty and substandard housing, health and education services, particularly those living on reserves.[7] First Nations private sector employment also tends to be more concentrated in industries that are either not growing as quickly as the rest of the economy, or are declining.

Many Aboriginal communities have indicated concerns about the rate and impact of coastal resource use and activities such as finfish aquaculture and ecotourism without participating in the economic benefits of such activities.[8] Resource agencies and industries are responding to these concerns through consultation, cooperative planning, and mechanisms such as joint venture agreements. These types of cooperation could be further encouraged by the recent establishment of an Economic Measures Fund of $30 million over three years, to be administered by the BC Treaty Negotiations Office, to support economic development projects involving First Nations.[9]

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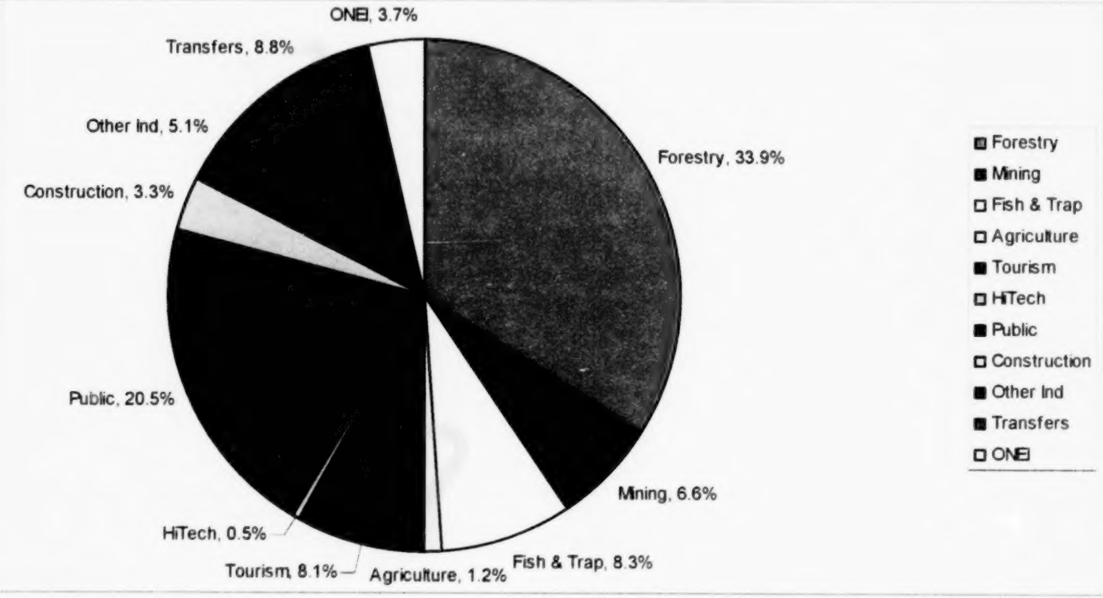
[6] Note that tourism, as defined by BC STATS, includes business travel.

[7] For example, the unemployment rate for registered Indians was 29% in BC compared to a provincial average of 9% in 1996. See *Aboriginal Labour Force Characteristics from the 1996 Census*, Indian and Northern Affairs Canada, March, 2001.

[8] *Kingcome Timber Supply Area Analysis Report*, Ministry of Forests, November, 2001 and *Salmon Aquaculture Review: Report of the Environmental Assessment Office*, August, 1997.

[9] *New fund to create economic opportunities for First Nations*, Treaty Negotiations Office News Release, April 23, 2002.

Figure 10 Income dependency in the North Island Straits Coastal Use Plan Area (1996)



Labour Force

Census of Canada labour force data provides a good indication of longer-term trends in the economic structure of regions and communities. Trends from 1981 to 1996 (the latest year available at this time) are examined here.

The service sector of the economy accounts for about 63% of the labour force in the NIS area, and comprises a higher proportion of labour force than the goods producing sector in all communities, except for CSD A.[10] Labour force data does not reflect that some service industries are somewhat dependent on incomes generated by basic goods-producing sectors (see discussion of economic dependency estimates above).

Total labour force in the NIS area doubled over the 1981-1996 period (i.e., from about 3,270 in 1981 to about 6,540 in 1996), representing an average annual growth rate of about 4.7% per year over this period. The total NIS area labour force in goods-producing industries declined in absolute and relative terms from 1981 to 1996, due primarily to declines in the mining sector. These changes at the NIS area level somewhat mask trends at the industry and community level. For example, the labour force in forestry actually increased in the NIS area, and overall goods producing labour force increased in Port McNeill, but were more than offset by declines in the mining sector in Port Hardy.

Service sector employment increased significantly in absolute and proportional terms from 1981 to 1996. These sectors are strongly linked with tourism growth, population aging, and the growth of knowledge-based industries, which are occurring in the NIS area and throughout the province. Public sector employment (i.e., health, education, and public administration), also increased in absolute and percentage terms during the 1981-96 period, although this trend will be reversed somewhat with recent provincial government lay-offs.

As shown in Figure 11, the proportional shift from goods-producing to services is evident throughout the NIS area, except for Alert Bay.[11]

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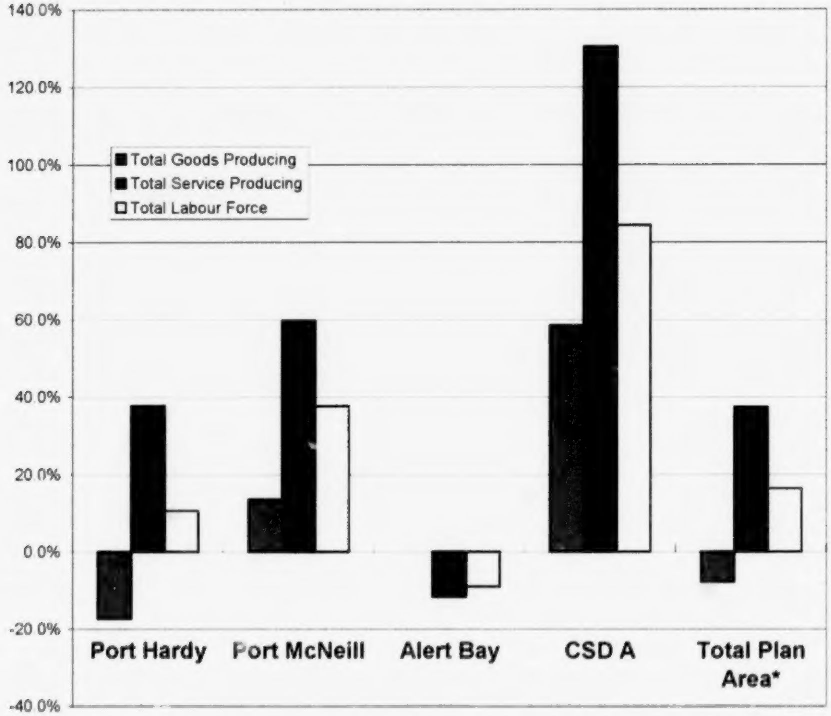
[10] For labour force data, the NIS area is defined as the sum of Port Hardy, Port McNeill, Alert Bay and Census Subdivision A of the Mt. Waddington Regional District, including First Nations Reserves.

[11] The data shown in the chart excludes Indian Reserves.

Figure 11 Sectoral Employment by Community in NIS Coastal Use Plan Area



With the exception of Alert Bay, the service sector labour force grew strongly even in those communities in which total goods-producing employment fell (e.g. Port Hardy).

Trends in Economic Structure Since 1996

There have been some significant changes in key resource sectors in the Plan Area since the 1996 census data analysis of economic dependency and labour force. In general, the relative importance of primary, goods producing industries such as forestry, fisheries and mining has likely continued to decline since 1996. Industries such as aquaculture (both grow-out operations and related processing) and tourism currently comprise a higher proportion of total income in the NIS area, resulting in greater diversity of the local economy.

Forestry Sector

Economic dependency data indicates that forestry employed about 1,450 workers in 1996, accounting for about 28% of total NIS employment and 34% of income in that year. A significant proportion of this employment is dependent on timber harvesting outside the NIS area, but much of the timber harvest within the NIS area is exported for processing elsewhere on Vancouver Island or the lower mainland.

Reductions in the Annual Allowable Cut AAC) in the Port McNeill Forest District (which includes the NIS area) have resulted in reductions in timber harvesting and processing employment in the area since 1996. While the Kingcome Timber Supply Area AAC was reduced by over 20% in November 1996, the TFL AACs did not decline significantly, and the NIS area is still one of the more forest dependent in the province.

Timber Supply Reviews for TFLs and the TSA indicate that the overall AAC for the Forest District is expected to decline over time, resulting in job reductions in timber harvesting, processing and related transportation / storage. Discussions with MoF staff indicate that reductions in harvest levels over time and a continuing consolidation trend in the industry may reduce the need for log storage and handling and crew quarters.

Aquaculture Sector

Economic dependency / labour force data is not readily available for aquaculture. The 41 salmon farm tenures in the NIS area account for about 33 percent of the province's farmed salmon production and employment – about 14,000 tonnes (dressed weight) and over 700 direct jobs annually[12]

In addition, there are several processing plants located in Port Hardy and Port McNeill relying primarily on farmed salmon that employ over 200 workers.[13] This represents a significant increase in employment since 1996, although not all of these jobs would be held by NIS area residents.[14]

There is significant biophysical potential for aquaculture expansion in the NIS area. Data provided by MSRM indicate there are about 3,600 hectares of good finfish, 28,500 ha of good oyster, and 15,500 ha of good scallop potential in the NIS area. It is likely that the number of aquaculture sites may increase, although resource conflicts and other factors will limit expansion.[15]

There is some interest in marine plant aquaculture in parts of the Plan Area, primarily the growing of kelp from long lines to provide feed for the experimental abalone farm on Malcolm Island. Studies indicate that if such ventures as abalone and sea urchin farms expand, there will be insufficient natural kelp available to supply their feed requirements. This will in turn increase demand for marine plant aquaculture sites in proximity to these abalone and sea urchin farms.

Public and Commercial Recreation (Tourism) Sector

Economic dependency / labour force data indicates that tourism sectors employed a total of about 850 workers in 1996, accounting for about 16% of total employment and 8% of income in that year. A significant proportion of tourism and recreation in the NIS area is marine-based, and the importance of such activities to the area economy has been increasing in recent years. A survey undertaken for the Salmon Aquaculture Review (SAR) process estimated employment of about 270 (85 of which were residents) in marine-related tourism in the Broughton area alone. This estimate is for 1997 and therefore does not include growth in the industry since then. It also does not include activities elsewhere in the NIS area and spending of recreationists.[16]

The area's tourism infrastructure includes commercial accommodation (hotels, motels, and an increasing number of B&B's), road and scheduled air access, several marinas and harbour facilities, and ferry service to Prince Rupert, Sointula, and Alert Bay.

Over the past 20 years, tourism in the North Island area has grown slowly but steadily due to the upgrading of Highway 19 from Campbell River, the relocation of the BC Ferries terminal to Port Hardy, and the increase in demand and opportunities for adventure tourism and wildlife viewing.

The trend to outdoor / adventure activities will likely continue in the NIS area because of its high quality resources. Realization of this potential will require careful management of recreation activities and potentially conflicting uses such as timber harvesting and aquaculture, as well as its own impacts on environmental quality and First Nations traditional uses and sensitive sites. The scarcity of protected anchorages and marine-related infrastructure are also constraints to tourism growth[17]

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[12] A MAFF survey of aquaculture operations by region for the year 2000 provides an alternative estimating approach. Based on average per farm employment for 29 sites surveyed in the north island region, total, direct, annual employment on salmon farms in the NIS area is estimated at about 600.

[13] Carmen Mathews, Ministry of Fisheries, Agriculture and Food, pers. comm.

[14] *Economic Impacts of the British Columbia Salmon Farming Industry*, Coopers & Lybrand, 1997.

[15] Estimates provided by MSRM and take into account existing siting criteria (e.g., buffers from salmon streams, etc.). Estimates exclude medium potential.

[16] See *Salmon Aquaculture Review*, op. cit. This is likely a conservative estimate even for the Broughton area since this represents employment only for survey respondents. A report entitled *Fishing for Money* (G. Gislason, et al, June 1998) estimated that the sport fishing component of marine tourism accounted for about 490 jobs, but this applies to the entire North Vancouver Island area.

Commercial Fisheries Sector

Labour force data for 1996 indicates that employment of about 350 in commercial fishing and about 240 in fish processing in the NIS area in 1996.[18] Together, employment in fishing and related processing accounted for about 12% of total employment in the NIS area in 1996. However, these estimates are dated and include employment in aquaculture and related processing[19]

Dependency on commercial fisheries is likely somewhat lower currently due to recent federal buyback of the salmon fleet. However, this has been partly offset by increased harvesting and processing of non-salmon species (e.g., groundfish) and under utilized salmon such as chum and pink for niche markets.

With the completion of the buyback program, it is likely that employment and incomes in commercial salmon fisheries will stabilize for the foreseeable future.[20] However, there remain concerns that the historical emphasis on hatchery production and the concentration of salmon production in a few large stocks has increased the vulnerability of the resource to a significant reduction arising from an unforeseen habitat loss, ocean survival problems or management error.[21] The shift of commercial (and even recreation) fishing to non-salmon stocks is creating conservation concerns, as evidenced by the recently announced closures for rockfish in the NIS and other areas.

Minerals and Energy Sector

Mining and energy accounted for about 5% of total income in the NIS area in 1996. However, there are no operating mines at present and little advanced exploration activities in the NIS area. There are some small sand and gravel pits in the NIS area, although no labour force was recorded in the 1996 Census.

BC Energy and Mines (MEM) describes the mainland and islands area of the NIS as having few proven mineral deposits and little exploration activity. It is under-explored compared to many areas in BC due to access problems, although there have been some small past producers in the area. Vancouver Island has a history of important mineral developments.

The likelihood and timing of mineral and energy development is uncertain. There are no proposed mineral developments in the NIS area, although the hidden nature of this resource means that it is particularly unpredictable.

According to preliminary data from the Geological Survey of Canada, the offshore region of BC has the potential to contain as much as 9.8 billion barrels of oil and 25.9 trillion cubic feet of natural gas. Part of this potential may lie with the NIS plan area.

The Northern portion of the Plan Area is covered by federal exploration permits held by both Shell Canada and Petro-Canada. Other than a single provincial permit, just south of Fort Rupert, there has been no oil and gas exploration activity off the coast of British Columbia since 1972, when a federal decision created a moratorium and halted all exploration and development on the coast. Reviewing the moratoriums remain a priority for both the federal and provincial governments, and this process is currently underway.

There are currently no coal bed methane permits/tenures on Vancouver Island. There is one experimental drilling operation currently operating in the Comox Valley under privately held oil and gas rights.

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[17] *Northern Vancouver Island Forest Recreation and Tourism Opportunities Study*. Economic Planning Group, December, 1997.

[18] These estimates are based on a total labour force (i.e., including employed and unemployed) for Port Hardy, Port McNeill, Alert Bay and CSD A, and an assumed unemployment rate of 10%.

[19] *Fishing for Money*, op. cit., estimates employment in 1997 of about 850 in salmon fishing and related processing, transportation and suppliers, but this is for the entire North Vancouver Island area, and does not reflect more recent fleet reductions due to buyback.

[20] See *Fishing for Money*, op. cit.

[21] Sources include: *State of the Fraser Basin: Assessing Progress Towards Sustainability*, Fraser Basin Management Program, 1995; and *Fish on the Line: The Future of Pacific Fisheries*, C. Walters, 1995..

MEM has not identified any geothermal resources suitable for power generation in the NIS. A recent report for BC Hydro suggests that a few sites in the NIS have good wind generation capability (i.e., with sustained wind averages of 6 to 8 m/s) in portions of Gilford, Turnour, West Cracroft and Nigei Islands, and along Goletas Channel north of Port Hardy. No sites rated "very good" (i.e., winds over 8 m/s) occur in the NIS Area. Information on tidal capability was not available, but the generally moderate tides of the area were not considered particularly attractive for tidal energy production.

Transportation of sand and gravel can require barge loading and offloading facilities. Potential development of mineral or energy projects on lands around the NIS could also require tenured onsite structures and facilities on foreshore and nearshore areas, although most infrastructure is likely to be shore-based in existing settlement areas such as Port Hardy. Mineral or energy resource development in, around or near the NIS could result in increased marine traffic, as product is transported for processing or to market.

3 Plan Direction

3.1 Use of the Plan

The NS Coastal Plan is designed for use by Land & Water British Columbia Inc. (LWBC) in dealing with **applications** for provincial Crown foreshore and nearshore tenures. With the exception of other compelling constraints or LWBC application requirements, all applications for uses that are consistent with the Plan should be accepted and evaluated by LWBC. The Plan may also assist LWBC in determining information and referral requirements, as well as tenure provisions or amendments of approved tenures.

The Plan has been developed with the assistance and support of the Regional District of Mount Waddington, and reflects a willingness of this local government body to work with LWBC on coordination of foreshore/ nearshore and upland planning and development. However, Regional District support of the Plan is not intended to replace the need for referrals to local government. Similarly, the Plan is not intended to replace provincial or federal agency referrals or to absolve LWBC from addressing its legal obligations to consult with First Nations on land tenure applications.

The Plan is intended to assist LWBC, First Nations, local government and other government agencies by screening or filtering out potential Crown land applications which may have limited opportunity for success. In this way, work loads of these agencies and organizations can be expected to be lowered in both volume and level of complication or controversy.

The Plan is intended assist prospective land tenure applicants by providing an indication of important attributes, uses, activities, interests, opportunities and constraints for foreshore and nearshore uses within the Plan Area. In so doing, it identifies important areas for conservation and recreation and recommends measures to reinforce these values. Finally the Plan provides a useful marketing tool for coastal community and First Nations economic development.

3.2 Strategic Level Direction

The NIS Coastal Plan was initiated as a result of recommendations from the Central Coast Land and Coastal Resource Management Plan (CCLCRMP) process to undertake more detailed tenure planning in this area. These strategic level recommendations were endorsed by planning participants, subsequently reviewed by government, modified as appropriate, and incorporated into a document referred to as the Central Coast Coastal Zone Strategic Plan (available on the MSRM website at http://srmrpdwww.env.gov.bc.ca/lrmp/cencoast/index.htm.

The Coastal Zone Strategic Plan was approved in principle by the provincial government in October 2001. It has not been finalized, due to implementation issues of provincial and federal agencies and concerns of First Nations. It is expected that work will resume on this document after completion of the CCLCRMP's terrestrial planning work (expected in June 2003).

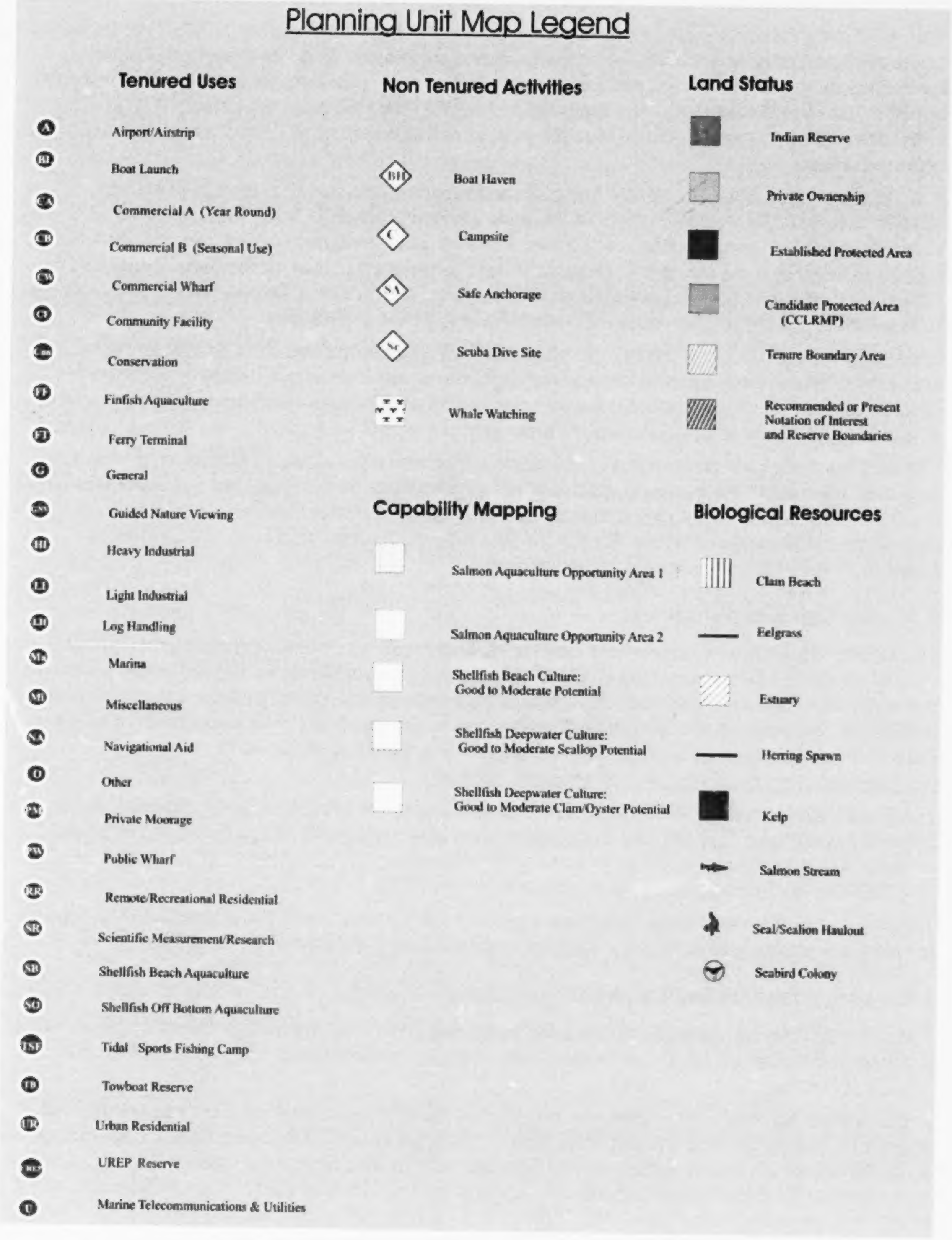
The NIS Coastal Plan recommendations are intended to be consistent with the general direction for tenuring and non-tenured activities as outlined in the existing Coastal Zone Strategic Plan.

3.3 Uses, Activities and Emphasis

The NIS Plan Area has been subdivided into 66 planning units. Unit boundaries are derived from marine ecosystem classification, with modification in some areas to reflect human use patterns and specific biological features.

For each planning unit, a description and map is provided of resource attributes, existing tenured uses, activities not under provincial jurisdiction, status of adjacent upland, and resource capabilities for selected uses. Some (not all) upland features and non-tenured activity areas are shown, but the Plan does not prescribe uses for these upland areas or activities (e.g. public recreation sites). A list of foreshore and nearshore uses and activities is shown in Table 5 and Table 6. A legend, associated with the unit maps is shown in Figure 12.

Figure 12 Map Legend



Planning Unit Map Legend

Tenured Uses

A	Airport/Airstrip
BL	Boat Launch
CA	Commercial A (Year Round)
CB	Commercial B (Seasonal Use)
CW	Commercial Wharf
CF	Community Facility
Con	Conservation
FF	Finfish Aquaculture
FT	Ferry Terminal
G	General
GN	Guided Nature Viewing
HI	Heavy Industrial
LI	Light Industrial
LH	Log Handling
Ma	Marina
Mi	Miscellaneous
NA	Navigational Aid
O	Other
PM	Private Moorage
PW	Public Wharf
RR	Remote/Recreational Residential
SR	Scientific Measurement/Research
SB	Shellfish Beach Aquaculture
SO	Shellfish Off Bottom Aquaculture
TSF	Tidal Sports Fishing Camp
TB	Towboat Reserve
UR	Urban Residential
UREP	UREP Reserve
U	Marine Telecommunications & Utilities

Non Tenured Activities

BH	Boat Haven
C	Campsite
SA	Safe Anchorage
SC	Scuba Dive Site
⁂	Whale Watching

Land Status

■	Indian Reserve
▒	Private Ownership
■	Established Protected Area
▓	Candidate Protected Area (CCLRMP)
▨	Tenure Boundary Area
▨	Recommended or Present Notation of Interest and Reserve Boundaries

Capability Mapping

□	Salmon Aquaculture Opportunity Area 1
□	Salmon Aquaculture Opportunity Area 2
□	Shellfish Beach Culture: Good to Moderate Potential
□	Shellfish Deepwater Culture: Good to Moderate Scallop Potential
□	Shellfish Deepwater Culture: Good to Moderate Clam/Oyster Potential

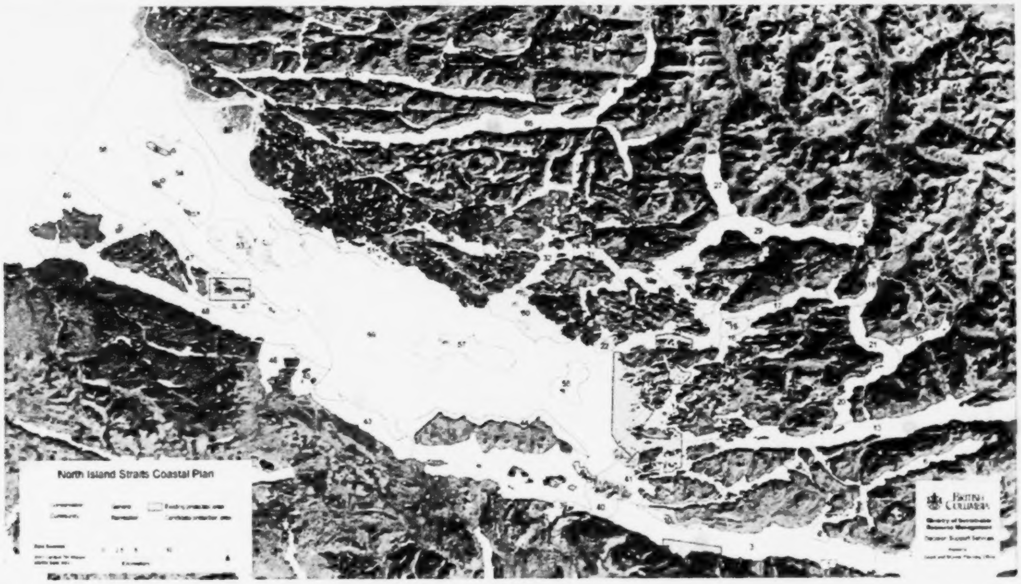
Biological Resources

▥	Clam Beach
—	Eelgrass
▨	Estuary
—	Herring Spawn
■	Kelp
➔	Salmon Stream
♠	Seal/Sealion Haulout
⊖	Seabird Colony

The degree of acceptability of uses that may be tenured by Land and Water British Columbia (LWBC) is determined using the four level code of Table 7. Ongoing activities (not under provincial jurisdiction) are also identified. The determination of acceptable uses was determined using decision rules that considered existing use commitments, compatibility, and agency siting criteria and best management practices. A list of basic decision rules and other decision assistance tools are provided in Appendix 4.

Along with showing acceptable uses, each planning unit has been assigned to one of four "management emphasis" categories (see Table 8 and Figure 13). A category represents a characteristic "flavour" of existing values and uses, level of development, and opportunities. Each category reflects differences in the constraints that should be placed on uses and activities within planning units assigned to that category. Recommended uses and activities are not the same for all units with the same management emphasis, and so should not be considered or treated as conventional land use designation or zoning categories.

Figure 13 Management Emphasis Categories



For each unit, "management provisions" have been developed to provide guidance on concerns, conflicts, competition, information needs and capacity issues within each planning unit. Provisions generally reflect situations or potential conflicts for which no government siting criteria or guidelines are available, as well as situations where the Plan recommends specific processes, actions or considerations that are unrelated to siting criteria.

Final unit recommendations reflect review and discussion with the public, interest groups, local government, government agencies and First Nations (see Appendix 2 and Appendix 3).

A list of the 66 planning units, their assigned management emphasis, and a summary of uses recommended in each unit is shown in Table 9.

Table 5 Foreshore and Nearshore Uses

Uses and Associated Facilities & Structures
Shellfish Beach Aquaculture • Growing and harvesting of shellfish on tenured beach or intertidal locations, usually in the substrate. • Associated facilities.
Shellfish Deep Water Aquaculture • Growing and harvesting of shellfish and other invertebrates in deep water or subtidal locations, usually on suspended trays, lines or other structures anchored to the sea bed. • Associated facilities.
Marine Plant Aquaculture • Growing and harvesting of marine plants such as kelp on tenured sites for commercial purposes. • Associated facilities.
Finfish Aquaculture • Farming for salmon and other finfish species in deep water net cages or other containment structures, anchored to the sea bed. • Associated storage and accommodation facilities.
Log Handling, Storage & Infrastructure • Log dumps, log sorts, heli-log drop sites. • Floating camps and other related facilities & infrastructure.
General Commercial • Commercial marinas, docks, wharves, breakwaters and associated floating structures.
Light Industrial • Storage tanks, industrial wharves and associated structures below high water mark.
Private Moorage • Private docks; wharves; boat houses; mooring buoys.
Rural Development • Individual float homes; floating communities.
Marine Telecommunications & Utilities • Underwater hydro, telephone, utility rights-of-way • Floating facilities associated with wave energy generating stations & other utility uses.
Community & Public Institutional • Community docks, wharves, piers, breakwaters, transportation facilities & structures.
Commercial Recreation: Guiding Operations • Extensive commercial recreation guiding operations, including kayaking, diving, wildlife viewing, and other ecotourism.
Commercial Recreation: Lodges and Base Camps • Continuous seasonal occupation of shoreline areas for haul-out of boats, camping and related activities, and access to camping on adjacent upland. • Continuous seasonal moorage of floating camps or mother-ships. • Camps or structures on pilings or floats, including docks associated with lodges and base camps.
Conservation • Use for conservation of cultural and recreational resources, marine ecosystem or fish habitat; includes areas required for scientific and research purposes. • Existing regional and local parks, *Land Act* reserves or notations of interest for conservation; and existing provincial parks, ecological reserves, conservation or protection areas.

Table 6 Foreshore and Nearshore Activities (not tenured by provincial government)

Activities and Associated Facilities
First Nations
• Traditional and existing uses including sustenance, spiritual, ceremonial; heritage sites & routes
NOTE: The Plan recommendations on acceptability of a tenure application do not alter or remove provincial agency obligations for First Nations consultation if specific development applications are accepted for processing..
Public (Non-Commercial) Recreation
• Wildlife viewing; swimming; kayak staging & landing areas; surfing; scuba diving; birding.
• Sport fishing (angling; fly-fishing); public harvesting of shellfish.
• Power boat, sailboat, canoe and kayak routes.
Commercial Fisheries
• Fishing by vessel using a variety of gear-types in accordance with federal regulations, licenses and openings.
• Includes commercial clam and shellfish harvesting, and commercial crab, prawn and shrimp harvesting under license.
Marine Transportation
• Tow, barge, freighter, ferry, and cruise ship routes.

Table 7 Code for Acceptable Uses and Activities

✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

The Plan provides an appeal process for uses marked as • or as **X** under certain circumstances and conditions.

Table 8 Management Emphasis Categories

Conservation Emphasis

- Units predominated by or adjacent to significant marine ecological or cultural features and values, including existing terrestrial or marine protected areas (or proposed areas) and areas withdrawn or reserved from disposition for conservation values.
- Activities and tenured uses should be compatible with and sensitive to conservation values in the unit or on adjacent upland.
- Preferred future uses are those that would be compatible with the conservation and cultural values and features on which the unit emphasis is based.
- Management mechanisms applied in these units include: compatible or complementary uses only; special management and siting criteria; further investigation for marine protection designation; and reserves or notations of interest to ensure tenure applications are compatible with values.

Recreation Emphasis

- Units predominated by public and commercial recreational activities, significant features and opportunities, including areas withdrawn or reserved from disposition for recreation values. Often adjacent to significant terrestrial or marine protection areas (or proposed areas) with high recreation values.
- Recreational values, opportunities and experiences should be maintained and/or encouraged.
- Other activities and tenured used should be sensitive to recreational values and experiences, particularly in key seasons or periods.
- Preferred future uses are those that would be compatible with the recreation values and features on which the unit emphasis is based.
- Management mechanisms applied in these units include: compatible or complementary uses only; special management provisions and codes of practice to minimize impact or conflict during recreational seasons; and reserves or notations of interest to ensure tenure applications are compatible with values.

Community Emphasis

- Units predominated by a concentration of multiple uses and activities that are associated with adjacent floating or upland settlement. Typically includes combinations of commercial, industrial, community and public institutional uses, private moorage and rural development.
- A variety of uses is maintained and/or encouraged in these areas, and most uses should be compatible.
- Non-commercial activities and tenured uses should be undertaken with the expectation that they will not interfere with or impede existing uses and activities.
- Management mechanisms applied in these units include: special management provisions and codes of practice to minimize conflict; reserving of specific opportunity areas for future tenure; and provisions to minimize impact of development or preclude development in specific areas.

General Marine Emphasis

- Units characterized by relatively remote locations with limited uses and / or development potential, with ongoing marine transportation and navigation activities and commercial and recreational fishery activities.
- Units include sporadic and discrete provincially tenured uses such as log handling facilities.
- Preferred use are those that would be compatible with ongoing activities and existing uses.
- Management mechanisms applied in these units include: special management provisions to maintain fisheries access and navigation requirements; use of standard codes of practice and tenure provisions; and provisions to minimize impact of development or preclude development in specific areas.

3.4 Planning Unit Direction

Table 9 Summary of Use Recommendations and Management Emphasis for NIS Plan Area

Unit	Name	Management Emphasis	Community & Public Institutional	General Commercial	Light Industrial	Marine Telecommunications & Utilities	Rural Development	Conservation	Log Handling, Storage & Infrastructure	Private Moorage	Finfish Aquaculture	Marine Plant Aquaculture	Shellfish Beach Aquaculture	Shellfish Deep Water Aquaculture	Commercial Recreation: Guiding Operations	Commercial Recreation: Lodges and Base Camps
1	Haylahte (Adam & Eve)	Co	X	X	X	X	X	✓	•	•	X	X	X	X	✓	X
2	Broken Islands	Re	X	X	X	X	X	✓	X	X	X	O	O	O	✓	X
3	Johnstone	Gm	X	X	X	O	X	✓	•	X	X	X	X	X	✓	X
4	Port Harvey	Gm	X	✓	X	O	✓	✓	✓	✓	X	✓	✓	✓	✓	X
5	Havannah Channel	Gm	X	✓	X	O	✓	✓	✓	✓	•	✓	✓	✓	✓	✓
6	Call Inlet	Gm	X	X	X	X	X	✓	•	X	X	✓	✓	✓	✓	✓
7	Chatham Channel	Re	✓	✓	X	O	•	✓	✓	✓	X	X	X	X	✓	✓
8	Minstrel	Re	X	✓	X	O	•	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	Clio Channel	Co	✓	✓	X	O	•	✓	•	✓	X	✓	✓	X	✓	•
10	Boat Bay	Re	✓	X	X	O	X	✓	X	X	X	X	X	X	✓	X
11	Mamalilikula	Co	✓	✓	X	•	•	✓	✓	✓	•	X	✓	X	✓	X
12	Port Elizabeth	Gm	X	✓	X	O	X	✓	✓	X	✓	X	X	✓	✓	✓
13	Knight Inlet	Gm	X	✓	X	X	X	✓	✓	✓	•	X	X	✓	✓	✓
14	East Broughton	Co	•	•	X	O	X	✓	✓	X	•	X	X	X	O	X
15	Burdwood Group	Re	✓	X	X	O	X	✓	X	X	•	X	X	X	✓	X
16	Echo Bay	Ct	✓	✓	X	✓	✓	✓	✓	✓	X	✓	X	✓	✓	✓
17	Tribune North	Re	X	✓	X	X	X	✓	✓	X	•	✓	X	✓	O	✓
18	Bond Sound Kwatsi Bay	Re	X	✓	X	O	X	✓	✓	X	✓	✓	X	✓	✓	✓
19	Thompson	Gm	X	X	✓	X	X	✓	✓	✓	X	X	X	X	✓	✓
20	Tribune South	Gm	X	X	X	X	X	✓	✓	X	✓	O	X	✓	✓	✓
21	East Tribune	Gm	X	✓	X	X	X	✓	✓	X	✓	X	X	X	✓	✓
22	Cullen Harbour	Co	✓	X	X	X	X	✓	X	X	X	X	✓	✓	✓	X
23	Fife Sound	Re	X	✓	X	X	X	✓	✓	X	✓	✓	X	✓	✓	✓

Unit	Name	Management Emphasis	Community & Public Institutional	General Commercial	Light Industrial	Marine Telecommunications & Utilities	Rural Development	Conservation	Log Handling, Storage & Infrastructure	Private Moorage	Finfish Aquaculture	Marine Plant Aquaculture	Shellfish Beach Aquaculture	Shellfish Deep Water Aquaculture	Commercial Recreation: Guiding Operations	Commercial Recreation: Lodges and Base Camps
24	Simoom Sound	Re	X	X	X	X	X	✓	✓	X	•	✓	X	✓	✓	✓
25	Moore Bay Shawl Bay	Re	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓
26	Belle Isle Sound	Gm	X	✓	X	X	X	✓	✓	X	X	X	X	X	✓	✓
27	Wakeman Sound	Gm	X	X	X	O	X	✓	✓	X	X	X	X	X	✓	✓
28	Kingcome Estuary	Co	✓	•	•	O	X	✓	✓	✓	X	X	X	X	✓	X
29	Kingcome Inlet	Gm	✓	X	✓	O	X	✓	✓	X	X	X	X	✓	✓	✓
30	Cypress Harbour	Gm	X	✓	X	O	X	✓	✓	X	•	✓	X	✓	✓	✓
31	Greenway Sound / Sutlej	Re	X	✓	X	X	X	✓	✓	X	•	✓	X	✓	✓	✓
32	Wells Passage	Gm	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓
33	Nepah Lagoon	Gm	X	X	X	X	X	✓	✓	X	X	✓	X	✓	✓	✓
34	Mackenzie Sound	Gm	X	✓	•	✓	X	✓	✓	✓	X	✓	✓	✓	✓	✓
35	Watson West	Re	✓	X	X	X	X	✓	✓	X	X	✓	X	✓	✓	✓
36	Watson East	Gm	✓	✓	X	O	X	✓	✓	X	X	✓	✓	✓	✓	✓
37	Drury East	Co	X	X	X	X	X	✓	X	X	X	✓	X	✓	✓	X
38	Drury West	Gm	X	✓	X	X	X	✓	✓	✓	X	✓	✓	✓	✓	✓
39	Beaver Telegraph Cove	Ct	X	✓	✓	✓	✓	✓	✓	✓	O	X	X	X	✓	X
40	Hanson	Re	X	X	X	O	X	✓	✓	X	X	X	X	X	✓	X
41	Blackfish Sound	Re	✓	✓	X	✓	X	✓	✓	X	X	O	O	O	✓	X
42	Cormorant Channel	Ct	✓	✓	✓	✓	X	✓	✓	✓	X	✓	✓	✓	O	X
43	Cluxewe Keogh	Co	✓	✓	X	✓	X	✓	X	X	X	X	X	X	✓	X
44	North Malcolm	Re	✓	X	X	✓	X	✓	X	✓	X	O	O	O	✓	X
45	Beaver Harbour	Ct	✓	✓	X	✓	X	✓	X	✓	X	O	X	X	✓	X
46	Port Hardy	Ct	✓	✓	✓	✓	X	✓	✓	✓	✓	O	O	O	✓	X
47	Nigei Gordon Group	Co	X	✓	X	✓	X	✓	•	✓	•	O	O	O	O	X
48	Goletas Channel	Gm	✓	✓	X	✓	X	✓	✓	✓	✓	O	O	O	✓	✓
49	Hope Island	Co	✓	X	X	✓	X	✓	X	✓	✓	O	O	O	✓	X
50	Polkinghorne	Re	✓	X	X	✓	X	✓	X	X	X	✓	✓	✓	✓	X

Unit	Name	Management Emphasis	Community & Public Institutional	General Commercial	Light Industrial	Marine Telecommunications & Utilities	Rural Development	Conservation	Log Handling, Storage & Infrastructure	Private Moorage	Finfish Aquaculture	Marine Plant Aquaculture	Shellfish Beach Aquaculture	Shellfish Deep Water Aquaculture	Commercial Recreation: Guiding Operations	Commercial Recreation: Lodges and Base Camps
51	Blunden Harbour	Co	✓	X	X	X	X	✓	X	✓	•	✓	✓	✓	✓	X
52	Shelter Bay	Gm	X	✓	X	O	X	✓	X	X	✓	X	X	X	✓	✓
53	Deserters / Walker Group	Co	✓	X	X	O	X	✓	X	✓	•	O	O	O	O	X
54	Storm Pine Buckle	Co	X	X	X	X	X	✓	X	X	X	X	X	X	O	X
55	Cape Caution	Re	✓	X	X	O	X	✓	✓	✓	✓	✓	✓	✓	O	X
56	Queen Charlotte Sound	Gm	X	✓	X	X	X	✓	X	X	X	O	O	O	✓	X
57	Numas Islands	Co	X	X	X	X	X	✓	X	X	X	X	X	X	O	X
58	Foster	Co	X	X	X	X	X	✓	X	X	X	O	O	O	O	X
59	Queen Charlotte Strait	Gm	✓	✓	X	O	X	✓	X	✓	✓	O	O	O	✓	✓
60	Lassiter Seymour	Gm	X	✓	X	O	X	✓	✓	X	X	X	X	✓	✓	X
61	Lower Nugent	Gm	✓	✓	X	O	X	✓	✓	X	X	X	X	X	✓	X
62	Upper Nugent	Gm	X	✓	X	O	X	✓	✓	X	X	X	X	X	✓	X
63	Belize	Gm	X	✓	x	x	x	✓	✓	x	X	X	X	X	✓	x
64	Alison	Re	✓	✓	X	X	X	✓	✓	X	X	X	X	X	✓	✓
65	Seymour	Gm	X	✓	X	O	X	✓	✓	X	X	X	X	X	✓	X
66	Seymour Estuary	Gm	✓	✓	X	X	X	✓	✓	X	X	X	X	X	✓	X

Management Emphasis Category: Co = Conservation / Re = Recreation/ Ct = Community/ Gm = General

		Community & Public Institutional	General Commercial	Light Industrial	Marine Telecommunications & Utilities	Rural Development	Conservation	Log Handling, Storage & Infrastructure	Private Moorage	Finfish Aquaculture	Marine Plant Aquaculture	Shellfish Beach Aquaculture	Shellfish Deep Water Aquaculture	Commercial Recreation: Guiding Operations	Commercial Recreation: Lodges and Base Camps
Use is Acceptable and Appropriate	✓	28	39	6	15	6	66	43	26	14	24	14	29	57	14
Use is Conditionally Acceptable	O	0	0	0	24	1	0	0	0	1	14	12	11	9	2
Use is Acceptable at Existing Tenure Levels	•	1	2	2	1	4	0	5	1	12	0	0	0	0	0
Use is Inappropriate	X	37	25	58	26	55	0	18	39	39	28	40	26	0	50

Unit 1. Haylahte (Adam & Eve Estuary)

Marine Area	238 ha	**Shoreline**	6.6 km
Substrate	sand	**Slope**	sloping (5-20%)
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis – Conservation

Description

The unit is characterized by low exposure and low current and is dominated by the Adam and Eve river estuaries.

Unit Attributes

- The unit is significant for migratory birds and is a CWS area of interest
- Includes Adam and Eve river estuaries > 15 ha
- Migration route for Orcas: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Periodic Humpback Whale sightings: provincially blue listed species
- Salmonid streams: 11 observed, 9 assumed
- Important holding area for juvenile and adult salmon (local knowledge)
- Blue-listed species: Trumpeter Swan overwintering area (generally October through March)
- Moderate to high invertebrate values
- Tlowitsis traditional territory
- Indian Reserve at Haylahte
- Private upland along eastern edge of estuary

Current Uses & Activities

- First Nations: Food fishery throughout
- Marine-based wildlife viewing
- Kayak staging area
- Marine transportation route
- Commercial salmon fisheries
- Sport ground fishery and salmon fishery
- Private boat launch on log dump tenure, staging area for finfish aquaculture and remote community services
- Road-accessible campsite
- Log dump, upland logging camp leased to Tlowitsis for development

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture

  - X Finfish
  - X Marine Plant
  - X Shellfish Beach
  - X Shellfish Deep Water Aquaculture

- ✓ Conservation
- • Log Handling, Storage & Infrastructure
- • Private Moorage
- X General Commercial

Commercial Recreation:

  - X Lodges and Base Camps
  - ✓ Guiding Operations

Ongoing Non Tenured Activities

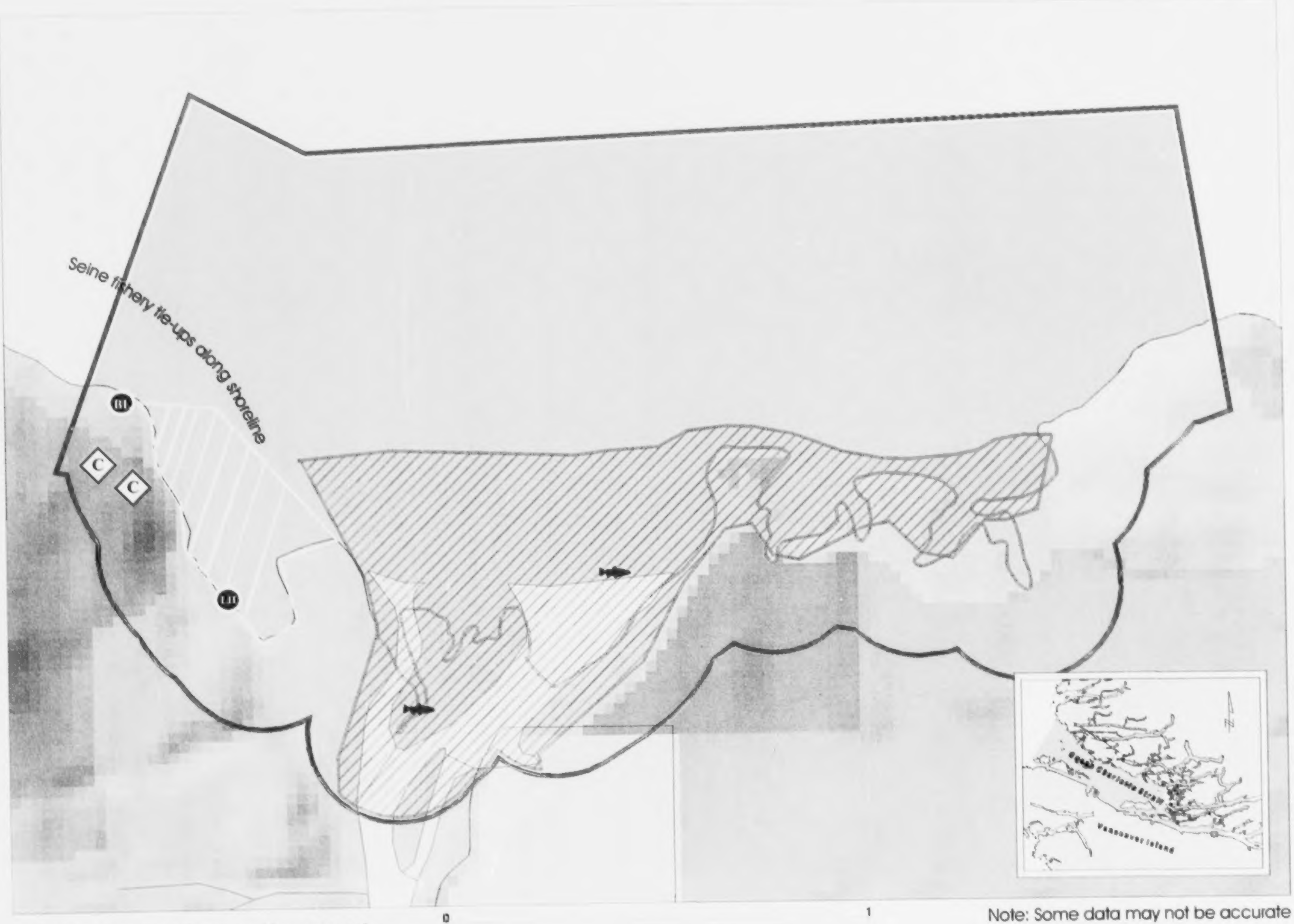
- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain high conservation values for birds, salmon, and marine mammals, particularly blue-listed Trumpeter Swans.
- Use should be encouraged of private boat launch on log handling tenure for servicing of salmon farms, adjacent communities, and for control of recreational boating and kayaking staging and access.
- Uses should be restricted to current levels, except where they are compatible with priority conservation values.
- MSRM & LWBC should work with affected groups, the regional district and the Tlowitsis First Nation to develop a strategy for management and allocation of campsites in this unit for both recreational and tourism uses.
- Management plans for commercial recreation guiding should attempt to reflect consultation with Tlowitsis First Nation to avoid harm to sensitive cultural sites.
- New tenures and activities should avoid disturbance to blue listed species site.
- All applications for uses in or within 1km of the estuaries should be referred to CWS.
- New tenures should not interfere with seine fishery shore tie-ups in the western portion of this unit.
- New tenures should not alienate recorded commercial dive fishery sites.
- Opportunities should be maintained for beach use for commercial and public recreation.

1 - Haylahte (Adam & Eve Estuary) (Conservation)


Seine fishery tie-ups along shoreline
C
C
Queen Charlotte Strait
Vancouver Island
N
0
1

Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

Kilometres
December 2002

Note: Some data may not be accurate
at the scale depicted

Unit 2. Broken Islands

Marine Area	466 ha	**Shoreline**	7.9 km
Substrate	sand	**Slope**	sloping (5-20%)
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - Recreation

Description

This unit consists of a group of small islands at the Johnstone Strait entrance to Havannah Channel.

Unit Attributes

- 2 kelp beds (28ha)
- 3 known intertidal clam beaches (9 ha)
- Seal and sea lion haulout
- Moderate to high invertebrate fisheries
- Red listed species: *Tayloriella Divaricata* algae found in subtidal waters is listed as critically imperiled provincially (S1) and vulnerable globally (G3).
- Salmon migration route
- Finfish aquaculture potential: OA 1 (outer extent of unit)
- Tlowitsis traditional territory

Current Uses & Activities

- First Nations: Shellfish harvest areas around Broken Islands; fishing along mainland coast, culturally significant areas throughout
- Remote campsites; kayaking routes throughout
- Sport ground fishery
- Commercial salmon gillnet, seine fisheries; prawn fishery

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- O Marine Plant
- O Shellfish Beach
- O Shellfish Deep Water Aquaculture

- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

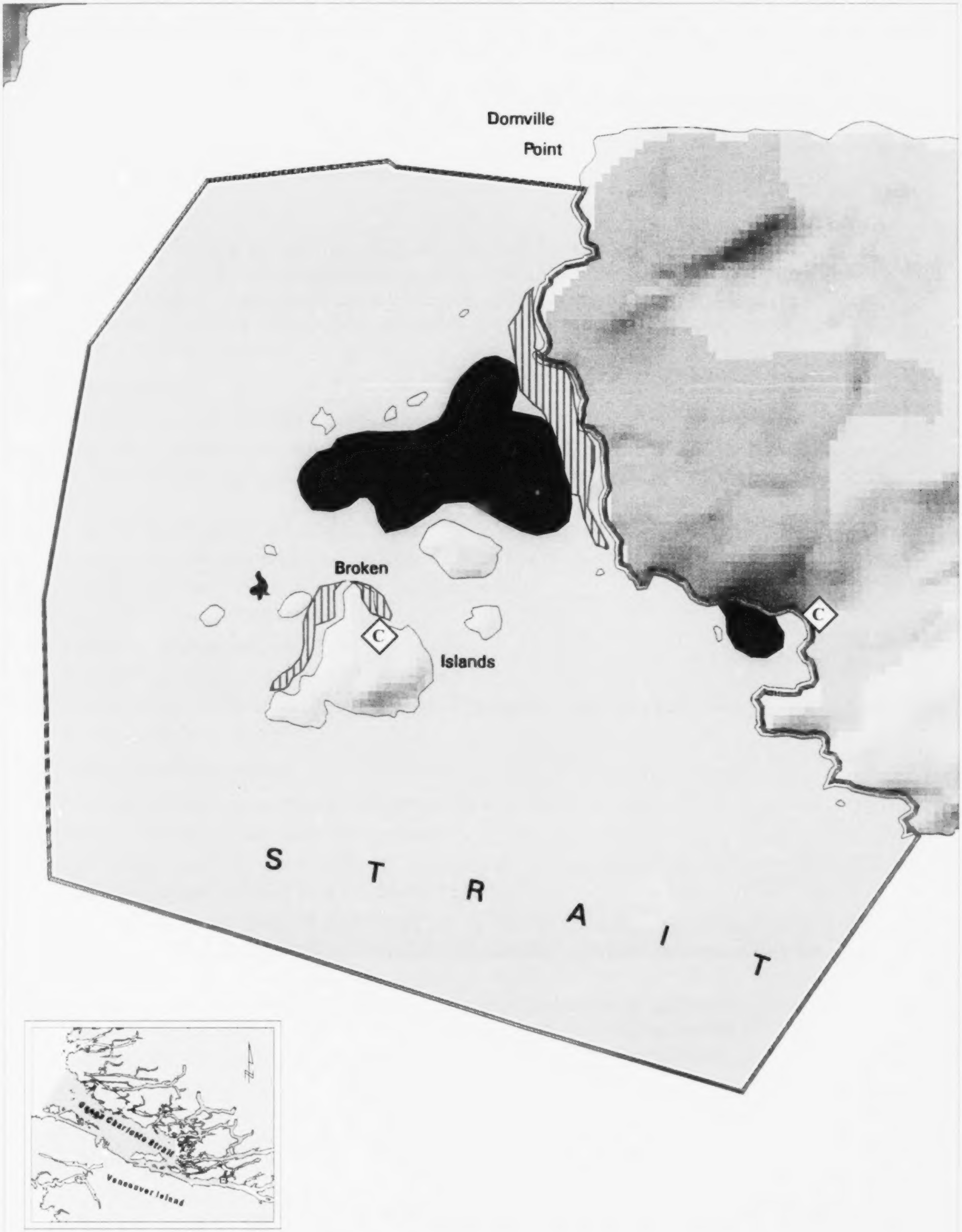
Code

✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain recreational uses and activities in a manner that minimizes impact to biological values. Consideration should be given to Tlowitsis abalone and related marine plant farms.
- Tenures and activities should avoid disturbance of *Tayloriella Divaricata* algae.
- Management plans for commercial recreation guiding should attempt to reflect consultation with Tlowitsis First Nation to avoid harm to sensitive cultural sites.
- New tenures should not alienate recorded commercial dive fishery sites.
- New tenures should minimize interference with fisheries activities.
- The regional district should address local recreational interests in its review of tenure referrals.
- MSRM & LWBC should work with affected groups, the regional district and the Tlowitsis First Nation to develop a strategy for management and allocation of campsites in this unit for both recreational and tourism uses.
- Tenure applicants are encouraged to develop working relationships with Tlowitsis First Nation.
- Conditional shellfish and marine plant aquaculture uses require submission of supporting biophysical information with license or lease application.

2 - Broken Islands (Recreation)


Domville
Point
Broken
Islands
C
C
S T R A I T
Queen Charlotte Strait
Vancouver Island
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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

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Kilometres

December 2002

Note: Some data may not be accurate at the scale depicted

Unit 3. Johnstone

Marine Area	14161 ha	**Shoreline**	73.9 km
Substrate	sand	**Slope**	sloping (5-20%)
Exposure	low	**Depth**	deep (200-1000m)
Current	low	**Benthic Summer Temp**	warm
Roughness	moderate - low		

Management Emphasis - General Marine

Description

The unit is characterized by rocky shoreline with a few pocket beaches. The Strait is heavily used for fisheries and as a major marine transportation route. It is a critical whale habitat area with high rates of sea kayak and whale watching activity due to the significant whale rubbing beaches of the adjacent Robson Bight Ecological Reserve. Unregulated access to Robson Bight via Naka Creek forestry road increases recreational pressure in this area.

Unit Attributes

- Migration route for transient & resident orcas
- Important Orca summer resting, winter feeding habitat: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- 2 Kelp beds (11 ha)
- Moderate to high invertebrate values along Cracroft Island shoreline
- Significant salmon migratory route (Fraser river stock)
- Salmonid streams: 14 observed, 4 assumed
- Finfish aquaculture potential: OA 1 throughout
- Tlowitsis traditional territory
- Hanson Island upland established as temporary Order-In-Council protection area under CCLRMP process, until June 30, 2003.

Current Uses & Activities

- First Nations: Fishing grounds throughout the area
- Popular boating area; kayaking along shoreline
- Marine transportation routes and log tie-ups; principal north-south coast navigation route (CCG)
- Important salmon troll area west of Robson Bight
- Commercial salmon fishery, prawn fishery
- Sport salmon Stimson Pt to West Cracroft Island, including Forward Harbour, ground fisheries; guided fly-fishing
- Whale watching; kayaking route and destination area: highest kayak user days in province, outside of Gulf Islands; over 20 sea kayak companies and several whale watching companies.
- Boat launch at log dump provides recreation user access to Robson Bight via Naka Creek forestry road
- Remote campsites
- Boat safe anchorage at Forward Bay
- Log booming sites, A-Frame logging operation, upland logging camp

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

- ✓ Conservation
- • Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

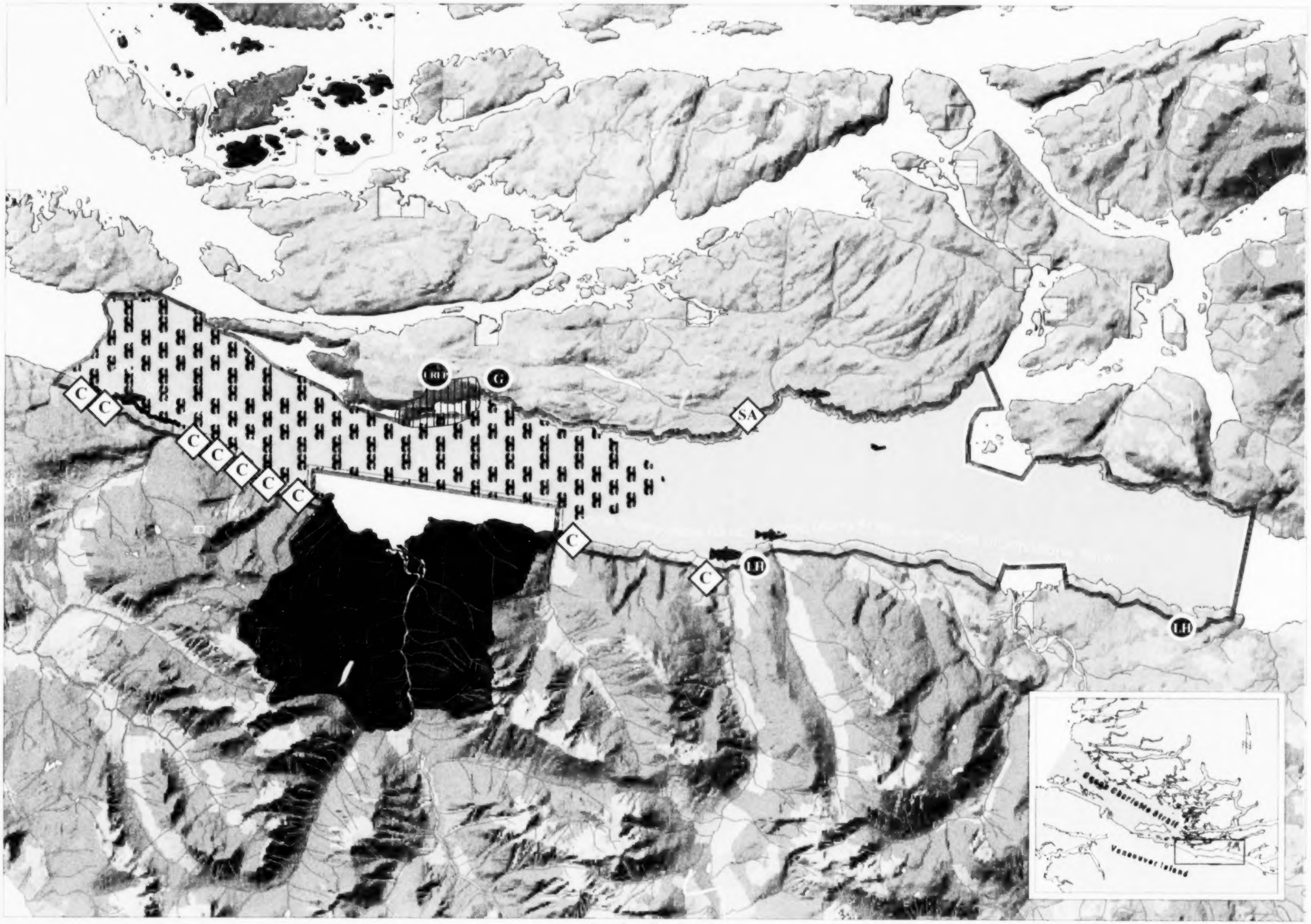
Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate existing uses and activities while improving management for whale watching and other recreational activities in the area.
- Tenure applicants are encouraged to develop working relationships with Tlowitsis First Nation.
- New tenures should be located to avoid impact on high value whale habitat.
- New tenures should not impede safe anchorage at Forward Bay.
- New tenures should not preclude seine fishery shore tie-ups.
- New tenures should not alienate recorded commercial dive fishery sites.
- The regional district should address local recreational interests in its review of tenure referrals.
- MSRM & LWBC should work with affected groups, the regional district and the Tlowitsis First Nation to develop a strategy for management and allocation of campsites in this unit for both recreational and tourism uses.
- Management plans for commercial recreation guiding should attempt to reflect consultation with Tlowitsis First Nation to avoid harm to sensitive cultural sites.
- Forest tenure holder and WLAP encouraged to collaborate on managing recreational access to Naka Creek boat launch.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.
- Uses adjacent to Hanson Island should be compatible with any future protection area planning or designation of the adjacent upland.

- Tenure approvals should be deferred adjacent to Hanson Island until June 30, 2003 or sooner to accommodate completion of collaborative management discussions.

3- Johnstone Strait (General Marine)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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

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December 2002

Note: Some data may not be accurate at the scale depicted

Unit 4. Port Harvey

Marine Area	308 ha	**Shoreline**	18.1 km
Substrate	sand	**Slope**	sloping (5-20%)
Exposure	low	**Depth**	mid-deep
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis – General Marine

Description

The area is an inlet with low exposure and low currents. It features several anchorages and commercial uses. Water quality concerns limit interest for salmon aquaculture.

Unit Attributes

- Estuary (21 ha)
- Adult salmon migration; juvenile salmon holding & migration area (local knowledge)
- Moderate to high invertebrate values
- Intertidal clam beach (15 ha)
- Good off bottom scallop and oyster capability (Port Harvey and Range Island), beach culture capability
- Finfish aquaculture potential: OA1 (southern half only)
- Tlowitsis traditional territory
- Indian Reserve at Keecekiltum; shorefront private parcels
- Private upland at northwest end of inlet, Mist Islets

Current Uses & Activities

- First Nations: Shellfish areas along coastline and Range Island; fishing grounds near entrance to Port Harvey; three areas of cultural significance along east side of the inlet.
- Log dumps (2), upland logging camp
- Remote residential
- Private moorage adjacent to Canoe Pass
- Safe anchorages at Mist Islets & one north of Range Island.
- Towboat reserves (2)
- Commercial salmon gillnet, seine fisheries; prawn & crab fisheries

Acceptable Uses & Activities

Tenured Uses

X Community & Public Institutional
X Light Industrial
O Marine Telecommunications & Utilities
✓ Rural Development

Aquaculture:
  X Finfish
  ✓ Marine Plant
  ✓ Shellfish Beach
  ✓ Shellfish Deep Water Aquaculture

✓ Conservation
✓ Log Handling, Storage & Infrastructure
✓ Private Moorage
✓ General Commercial

Commercial Recreation:
  X Lodges and Base Camps
  ✓ Guiding Operations

Ongoing Non Tenured Activities

✓ Commercial Fisheries
✓ Marine Transportation
✓ First Nations
✓ Public Recreation

Code

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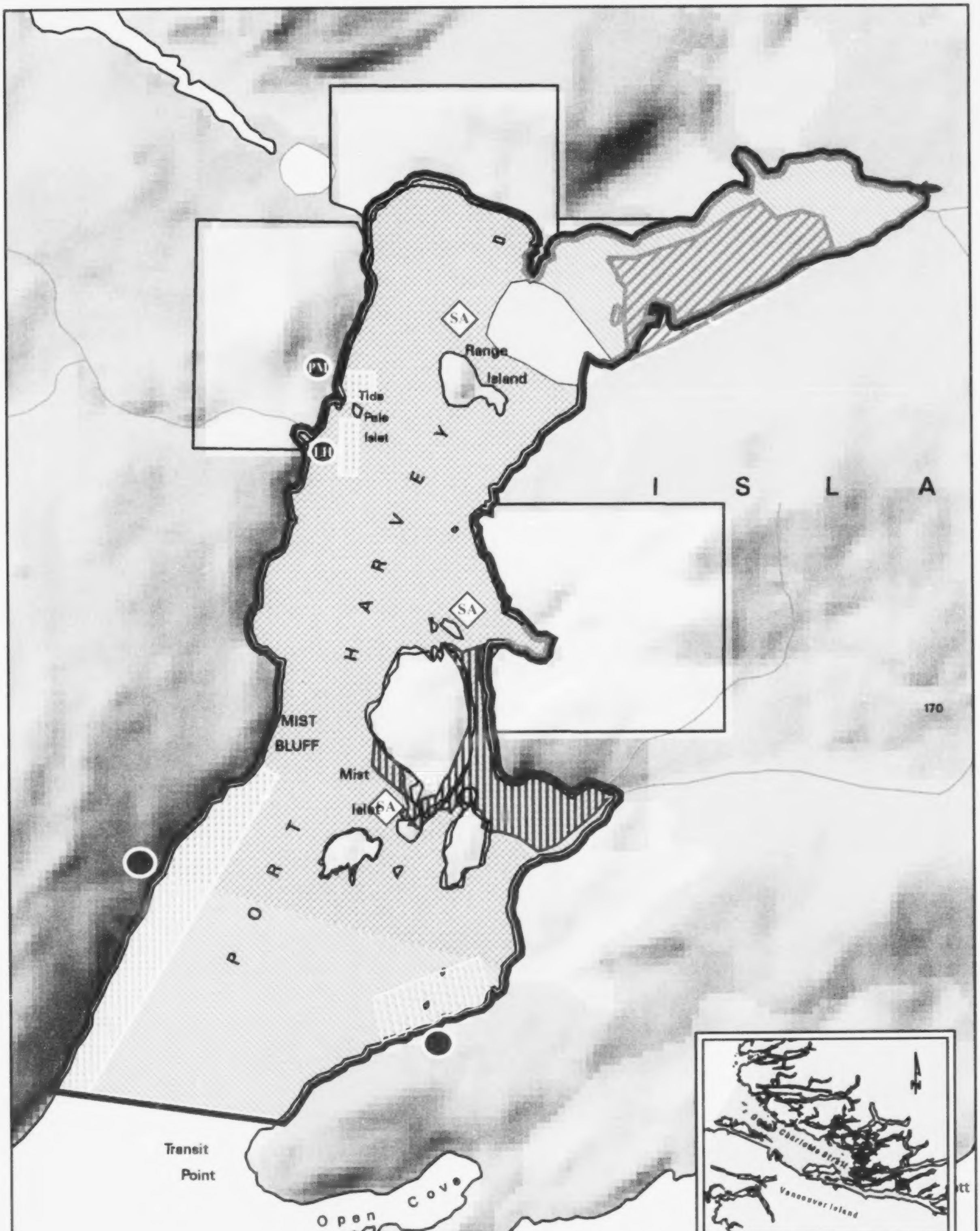
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain opportunities for development of commercial and recreational uses outside of estuary boundaries.
- Tenure applicants are encouraged to develop working relationships with Tlowitsis First Nation.
- New tenures should be located and managed to minimize impact on the estuary in this unit.
- Management plans for commercial recreation guiding operations should attempt to reflect consultation with Tlowitsis First Nation to avoid harm to sensitive cultural sites.
- New tenures should not impede safe anchorage at Mist Islets and Range Island area.
- New tenures should not alienate recorded commercial dive fishery sites.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

4 - Port Harvey (General Marine)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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

December 2002

Note: Some data may not be accurate at the scale depicted

Unit 5. Havannah Channel

Marine Area	1732 ha	**Shoreline**	48.5 km
Substrate	sand	**Slope**	flat
Exposure	low	**Depth**	photic
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis – General Marine

Description

The area is characterized by low exposure and low currents combined with shallow, warm marine environment. Recurring plankton blooms have disrupted existing salmon aquaculture operations.

Unit Attributes

- Ray Point and Root Point are significant areas for waterfowl and are CWS areas of interest.
- 2 kelp beds (16 ha)
- Moderate to high invertebrate values
- 10 intertidal clam beaches (34 ha)
- Salmonid Streams (2 observed, 6 assumed);salmon migration route
- Herring spawning (5 spawns recorded)
- Orca summer resting, winter feeding habitat: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Finfish aquaculture potential: OA 1 (excluding Boughey Bay)
- Good off-bottom scallop capability (Hull Island, northern portion of Havannah Channel)
- Good beach clam & oyster capability (2 sites- Boughey Bay)
- Tlowitsis traditional territory
- Indian Reserves (3)
- Private upland at Soderman Cove, Burial Cove, and Hull Island

Current Uses & Activities

- First Nations: Shellfish sites throughout Call Inlet entrance, off Hull Island, and the coastlines of Havannah channel and Bockett Islets. Fishing grounds extending from Ray Point throughout to Whitebeach Point. Culturally significant areas along Havannah Channel shoreline
- Salmon farms (2) including 1 slated for relocation; second tenure comprises two sites (western end)
- Log dumps (2)
- Year round commercial tenure
- Marina
- Commercial wharf
- Towboat reserve
- Boat haven at Burial Cove
- Safe anchorage at Boughey Bay
- Recreational boating; regular log towing area through main channel
- Commercial prawn, shrimp, crab fisheries
- Transport and navigation routes through Havannah Channel (CCG)

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- ✓ Rural Development

Aquaculture:

- • Finfish
- ✓ Marine Plant
- ✓ Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- ✓ General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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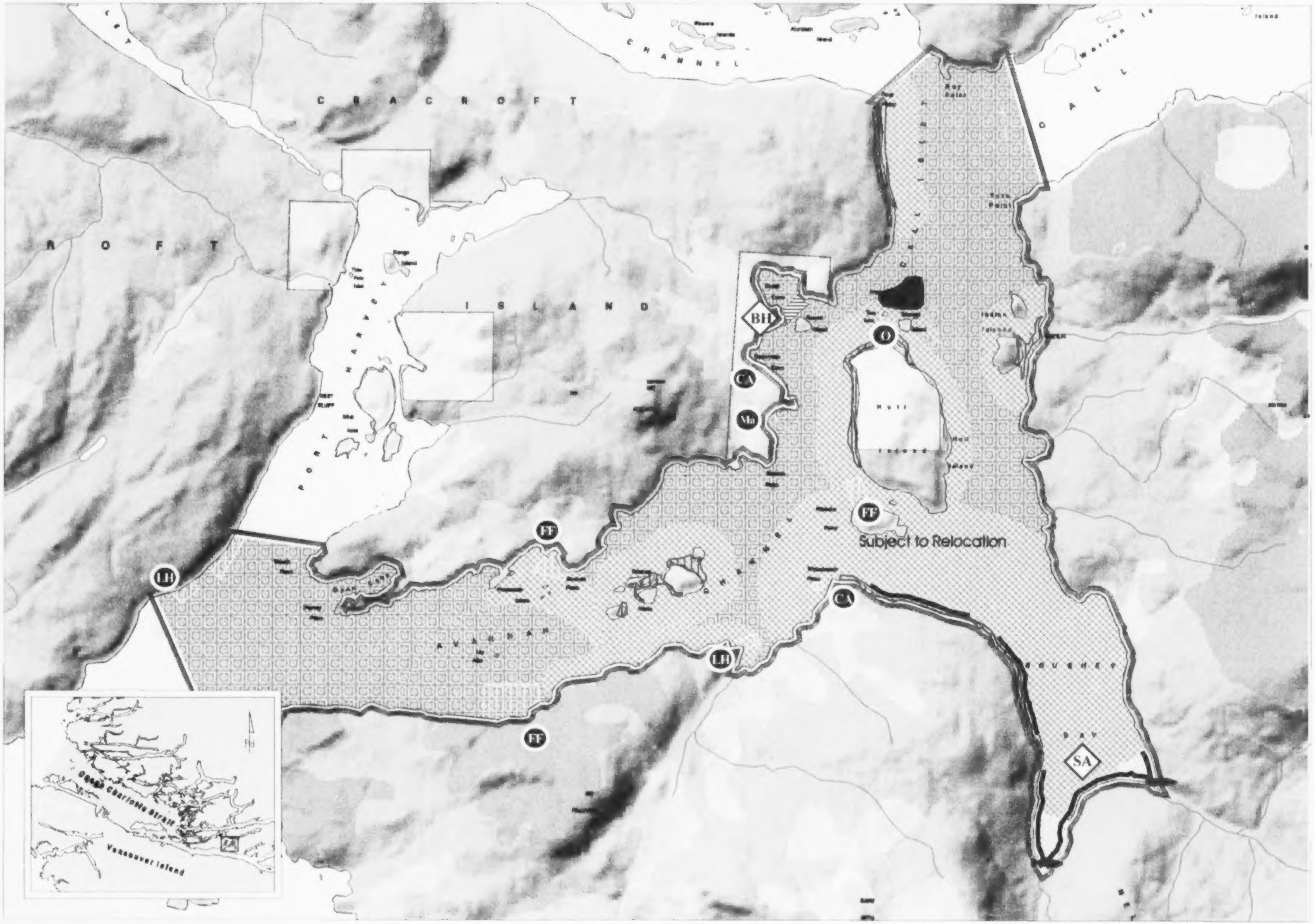
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain a variety of existing uses and accommodate new opportunities where compatible with marine biological conditions.
- Tenure applicants are encouraged to develop working relationships with Tlowitsis First Nation.
- Management plans for commercial recreation operations should attempt to reflect consultation with Tlowitsis First Nation to avoid harm to sensitive cultural sites.
- Establish *Land Act* Notation of Interest over Burial Cove boat haven.
- New tenures should not impede safe anchorage at Boughey Bay.
- New tenures should not alienate recorded commercial dive fishery sites.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- Commercial and industrial use applications within 1km or Ray Point and Root Point should be referred to CWS.
- Finfish aquaculture tenure modification may be approved to accommodate anchoring requirements and/ or waste management regulation requirements, which include fallow sites.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

5 - Havannah Channel (General Marine)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December 2002

Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

Note: Some data may not be accurate at the scale depicted

Unit 6. Call Inlet

Marine Area	2674 ha	**Shoreline**	51.0 km
Substrate	mud to sand	**Slope**	flat to sloping (5-20%)
Exposure	low	**Depth**	photic to mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis – General Marine

Description

The unit is a narrow, steep sided inlet predominated by logging on adjacent upland and log handling tenures. Major phytoplankton blooms originate from the inlet, limiting finfish aquaculture opportunities.

Unit Attributes

- Holding area for adult salmon; juvenile salmon rearing area (especially Chinook)
- Salmonid streams: 3 observed, 5 assumed
- Intertidal clams (9 beaches – 15 ha)
- High prawn value
- Good beach oyster capability (1 site)
- Blue listed species: Filamentous brown algae *Leptonematella fasciculata* found in subtidal waters of Felix Bay is ranked as critically imperiled provincially (S1).
- Finfish aquaculture potential: OA 1 throughout the unit
- Good off bottom scallop capability throughout unit
- Forest industry has identified potential log dump sites along north shore at head of inlet
- Tlowitsis traditional territory
- Adjacent Indian Reserve at Pawala

Current Uses & Activities

- First Nations: Food harvesting and cultural sites throughout unit
- Log dumps (4), log handling & storage (4)
- Barge ramp
- Sport salmon, ground fisheries
- Commercial prawn, shrimp, crab fisheries

Acceptable Uses & Activities

Tenured Uses

X Community & Public Institutional
X Light Industrial
X Marine Telecommunications & Utilities
X Rural Development

Aquaculture:
  X Finfish
  ✓ Marine Plant
  ✓ Shellfish Beach
  ✓ Shellfish Deep Water Aquaculture

✓ Conservation
• Log Handling, Storage & Infrastructure
X Private Moorage
X General Commercial

Commercial Recreation:
  ✓ Lodges and Base Camps
  ✓ Guiding Operations

Ongoing Non Tenured Activities

✓ Commercial Fisheries
✓ Marine Transportation

✓ First Nations
✓ Public Recreation

Code	
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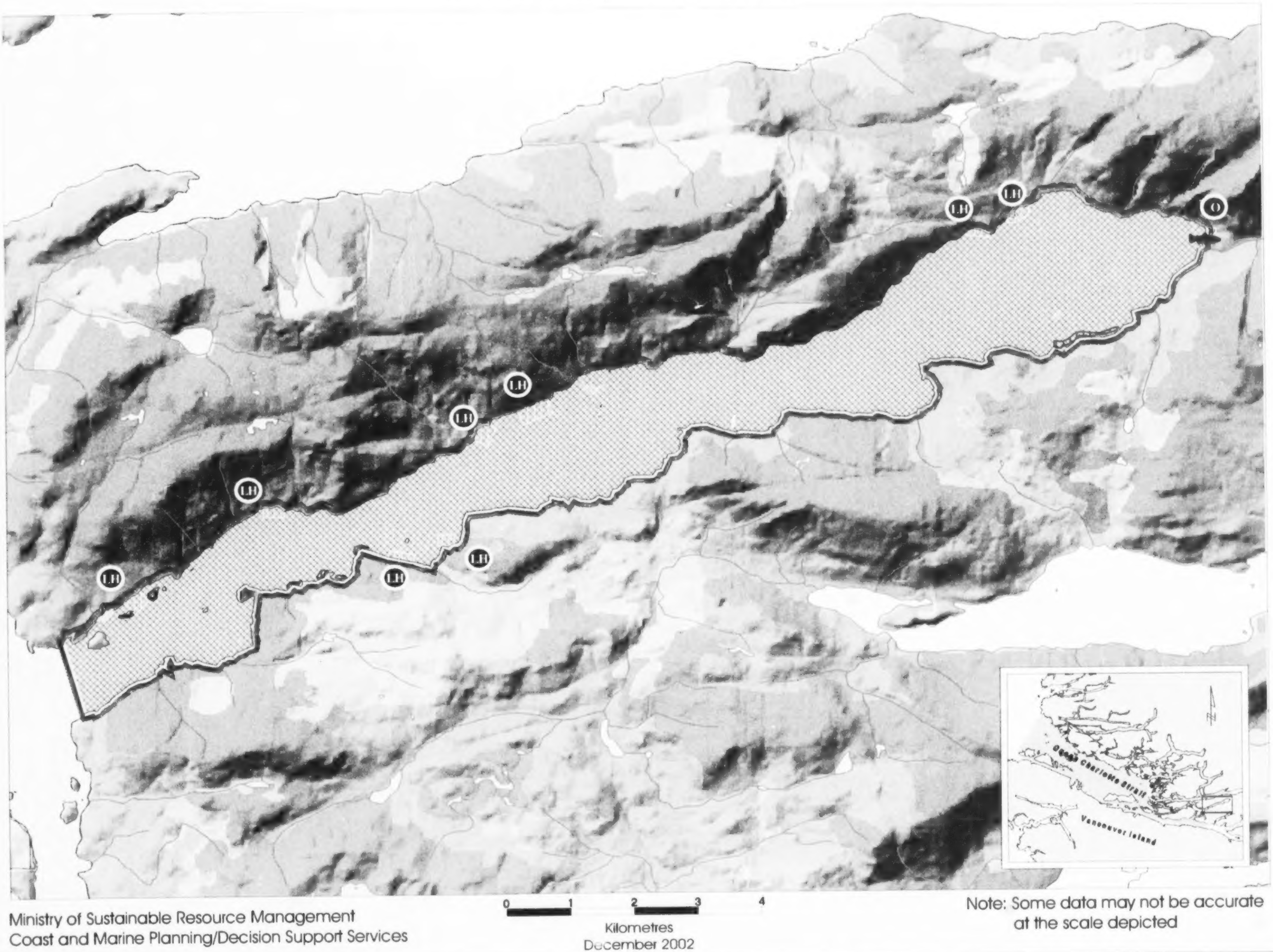
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain existing capacity for log handling, storage, and infrastructure, and promote new opportunities for other uses.
- Tenures and activities should avoid disturbance to blue listed filamentous brown algae *Leptonematella fasciculata* in vicinity of Felix Bay.
- Tenure applicants are encouraged to develop working relationships with Tlowitsis First Nation.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- Management plans for commercial recreation operations should attempt to reflect consultation with Tlowitsis First Nation to avoid harm to sensitive cultural sites.
- Log tow operators are encouraged to avoid prawn trap fishery areas.

6 - Call Inlet (General Marine)



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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

December 2002

Note: Some data may not be accurate at the scale depicted

Unit 7. Chatham Channel

Marine Area	953ha	**Shoreline**	36.1 km
Substrate	sand	**Slope**	flat
Exposure	low	**Depth**	photic
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis – Recreation

Description

The area is characterized by sheltered, low current waters. The unit supports high levels of recreation use.

Unit Attributes

- Chatham Channel is a significant area for migratory waterfowl (diving ducks, Cormorants, Scoters, , Western Grebes, Great Blue Herons) and is a CWS area of interest.
- 4 kelp beds (60 ha)
- Moderate to high invertebrate values
- Intertidal Clams (2 beaches – 9 ha)
- Salmonid Stream: 1 observed
- Known salmon holding area for Cutter Creek stocks (local knowledge)
- Herring spawning (3 spawns recorded)
- Orca summer resting, winter feeding habitat: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Finfish aquaculture potential: OA 1 (northern half only, excluding Cutter Cove)
- Moderate off bottom oyster capability
- Tlowitsis traditional territory
- Private upland at Hadley Bay

Current Uses & Activities

- First Nations: Extensive fishing and shellfish harvest areas throughout channel including the Blow Hole, Cutter Cove; numerous sensitive cultural sites
- Marina (3) – Minstrel Island
- Year round Commercial tenures (2)
- Public wharf
- Private moorage (2) – Minstrel Island
- Remote campsites
- Boat Haven in Cutter Cove
- Towboat reserve at entrance to Cutter Cove
- Primary boating route; important commercial navigation route
- Navigation aid (1)
- Remote residential (1)
- Log dump (1)
- Log transport tie-up area
- Sport salmon fishery
- Commercial prawn, shrimp, crab fisheries

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- • Rural Development

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- ✓ General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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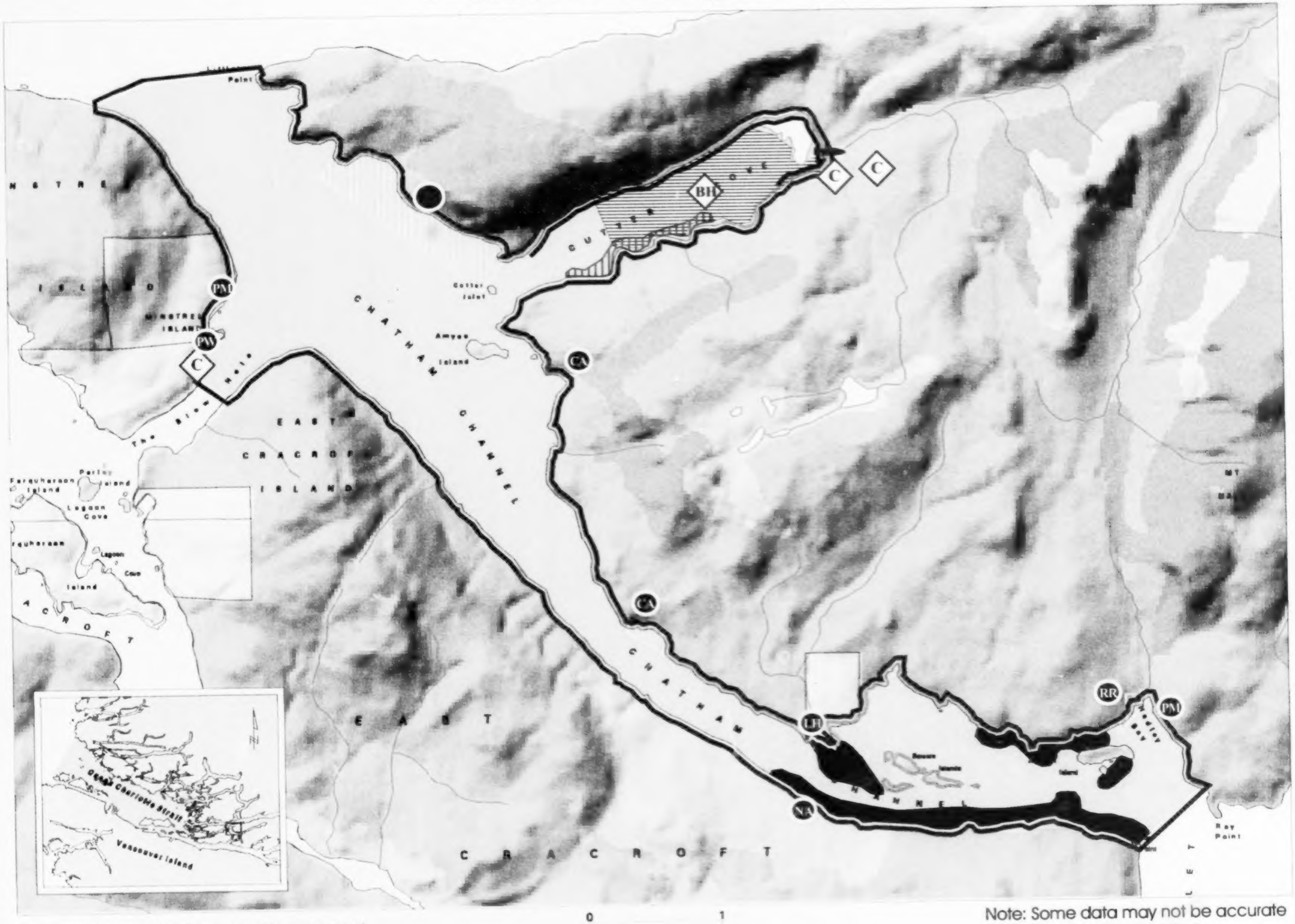
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain existing commercial recreational and public uses, including recreational boating routes, while minimizing conflicts between floating structures and prawn and crab fisheries.
- Tenure applicants are encouraged to develop working relationships with Tlowitsis First Nation.
- Establish *Land Act* Notation of Interest over Cutter Cove boat haven.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Management plans for commercial recreation operations should attempt to reflect consultation with Tlowitsis First Nation to avoid harm to sensitive cultural sites.
- New tenures should not alienate recorded commercial dive fishery sites.
- The regional district should address local recreational interests in its review of tenure referrals.
- Commercial and industrial use applications should be referred to CWS.
- Opportunities should be maintained for beach use for commercial and public recreation.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

7 - Chatham Channel (Recreation)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Note: Some data may not be accurate at the scale depicted

Unit 8. Minstrel

Marine Area	751ha	**Shoreline**	33.5 km
Substrate	mud	**Slope**	flat
Exposure	low	**Depth**	deep
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - Recreation

Description

The area is characterized by a low exposure, low current and deep warm marine environment supporting diverse biological values. Phytoplankton blooms may limit finfish aquaculture opportunities.

Unit Attributes

- Kelp beds throughout unit; eelgrass throughout, especially at head of Lagoon Cove (local knowledge)
- Moderate to high invertebrate values
- Intertidal Clams (7 beaches – 11 ha)
- Humpback Whale resident area: provincially blue listed species
- Salmon migratory route, smolt holding area
- Finfish aquaculture potential: OA 1 (northern area)
- Good off bottom scallop capability (entire area)
- Moderate beach clam and oyster capability between Dorman & Farquarhson Islands
- Tlowitsis traditional territory
- Private upland southern end of Minstrel Island, Farquarhson Island and eastern shore of Lagoon Cove

Current Uses & Activities

- First Nations: Shellfish areas along the Blow Hole, Lagoon cove and Bennett Point. Fishing grounds along Clio channel out to Knight Inlet. Sensitive cultural areas extending up inlet
- Commercial floating lodge and moorage at Lagoon Cove
- Year round commercial tenures (2)
- Seasonal commercial tenure
- Occasional log transport through area
- Remote campsites
- Primary boating route
- Boat safe anchorage at Lagoon Cove
- Sport salmon fishery, especially Chinook salmon between Minstrel and Turnour Island shore
- Commercial prawn, shrimp, crab fisheries

Acceptable Uses & Activities

Tenured Uses

X Community & Public Institutional
X Light Industrial
O Marine Telecommunications & Utilities
• Rural Development

Aquaculture:

✓ Finfish
✓ Marine Plant
✓ Shellfish Beach
✓ Shellfish Deep Water Aquaculture

✓ Conservation
✓ Log Handling, Storage & Infrastructure
✓ Private Moorage
✓ General Commercial

Commercial Recreation:

✓ Lodges and Base Camps
✓ Guiding Operations

Ongoing Non Tenured Activities

✓ Commercial Fisheries
✓ Marine Transportation
✓ First Nations
✓ Public Recreation

Code	
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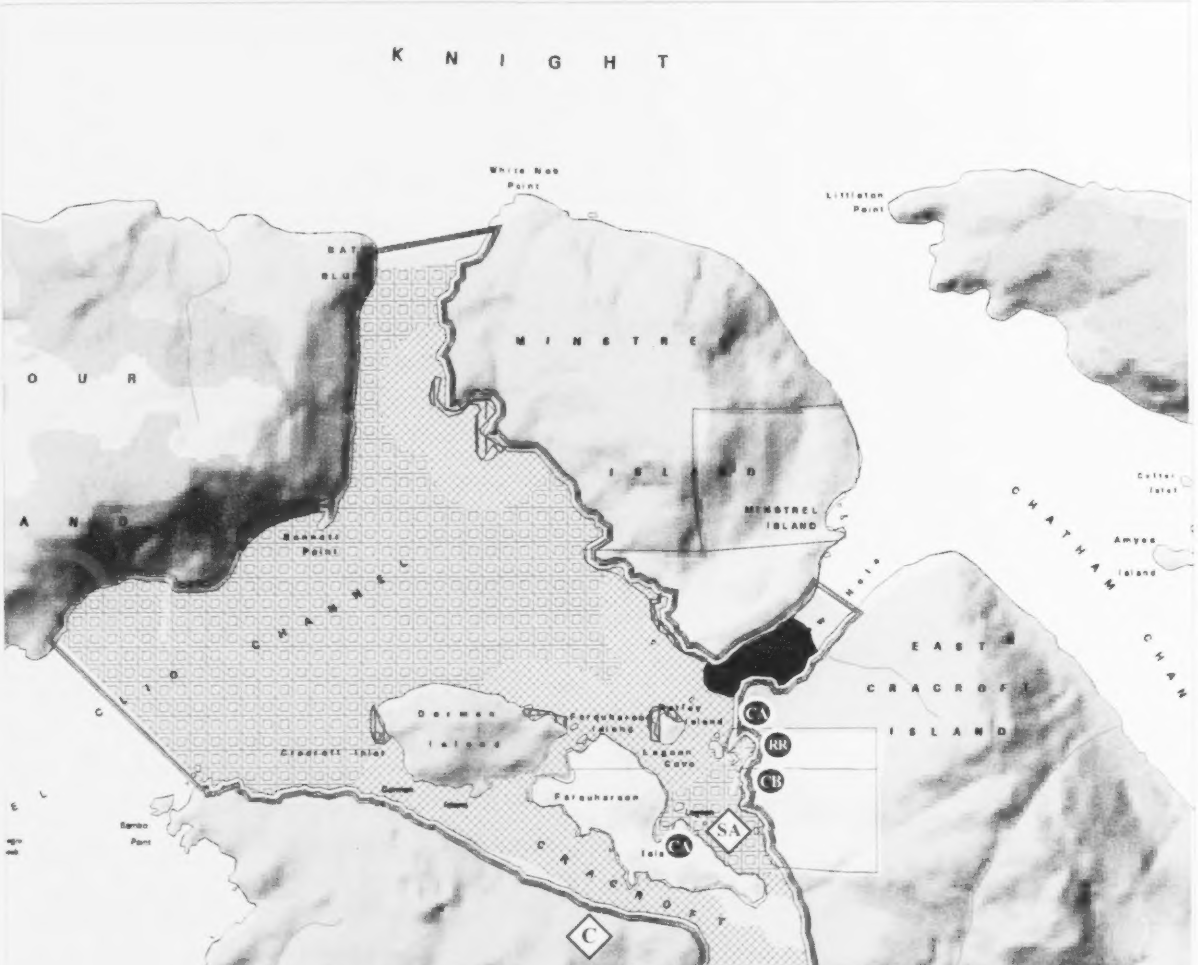
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain important recreation values and activities in this area.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Tenure applicants are encouraged to develop working relationships with Tlowitsis First Nation.
- Management plans for commercial recreation operations should attempt to reflect consultation with Tlowitsis First Nation to avoid harm to sensitive cultural sites.
- New tenures should not impede safe anchorage at Lagoon Cove.
- New tenures should not alienate recorded commercial dive fishery sites.
- New tenures in Lagoon Cove should not impact existing commercial crab fishery.
- New tenures should minimize interference with log towing routes and recreational boat traffic.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- The regional district should address local recreational interests in its review of tenure referrals.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

8 - Minstrel (Recreation)


K N I G H T
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Amyes Island
CHAN
EAST CRACROFT ISLAND
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Dorman Island
Farquharson Island
Cracroft Inlet
Lagoon Cove
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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

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Kilometres
December 2002

Note: Some data may not be accurate at the scale depicted

Unit 9. Clio Channel

Marine Area	3,439ha	**Shoreline**	152.0 km
Substrate	mud	**Slope**	flat
Exposure	low	**Depth**	deep
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - Conservation

Description

The area is a sheltered, deep and relatively narrow channel with numerous islands, islets and embayments in the eastern segment and extensive beaches in the western segment. High potential for plankton blooms limits finfish aquaculture potential. The area supports considerable recreational use.

Unit Attributes

- Beware Passage is significant for migratory waterfowl and shorebirds (scoters, Marbled Murrelets, Harlequin Ducks) and is a CWS area of interest
- 18 kelp beds (268 ha)
- Eelgrass Beds at Turnour Bay and through Beware Passage
- Moderate to high invertebrate values
- Intertidal clams
- Potts Lagoon – 8.81 km shoreline
- Salmonid Streams: (3 observed, 2 assumed); salmon migration route
- Herring spawning (45 spawns recorded)
- High value for rockfish
- Historic/Cultural Values (Ruins) - abandoned cannery
- Adjacent to Boat Bay Goal 2 protection area proposed by CCGAT in CCLRMP process; only upland now in CCLRMP terms of reference
- Finfish aquaculture potential: OA 1 (isolated opportunities)
- Good off bottom scallop and oyster capability (eastern half of unit)
- Good beach clam and oyster capability (Turnour Bay, Klaotsis Island)
- Traditional territory of Tlowitsis, and Mamalilikula (west end of Beware Passage)
- Adjacent Indian Reserves at Aglakumna, Aglakumna-la, Coffin Island, Dead Point, Karkulwees, and Small Island
- Private upland at Pott's Lagoon and at estuary east of Walden Island, Harbledown Island south of Dead Point

Current Uses & Activities

- First Nations: Extensive fishing and shellfish grounds throughout channel. Dispersed sensitive cultural sites throughout the unit.
- Marinas (2)
- Public wharf (1)
- Tidal sports fishing camp (1)
- Remote campsites (3)
- Shrimp, prawn and crab fishery
- Log towing through Beware Pass

- Boat Haven at Potts Lagoon (under *Land Act* Notation of Interest).
- Safe anchorages at Bones Bay; Walden Island, Caution Cove
- Safe boating route during storms; navigation channels through Clio and Baronet Pass (CCG)
- Year round commercial tenures (1)
- Seasonal commercial tenures (2)
- Other tenures (3)
- Illegal float homes (concern from local communities)
- Log dump (1), log handling & storage (12), upland logging camp, floating logging camp (1)

Acceptable Uses & Activities

Tenured Uses

✓ Community & Public Institutional
X Light Industrial
O Marine Telecommunications & Utilities
• Rural Development

Aquaculture:

X Finfish
✓ Marine Plant
✓ Shellfish Beach
X Shellfish Deep Water Aquaculture

✓ Conservation
• Log Handling, Storage & Infrastructure
✓ Private Moorage
✓ General Commercial

Commercial Recreation:

• Lodges and Base Camps
✓ Guiding Operations

Ongoing Non Tenured Activities

✓ Commercial Fisheries
✓ Marine Transportation

✓ First Nations
✓ Public Recreation

Code

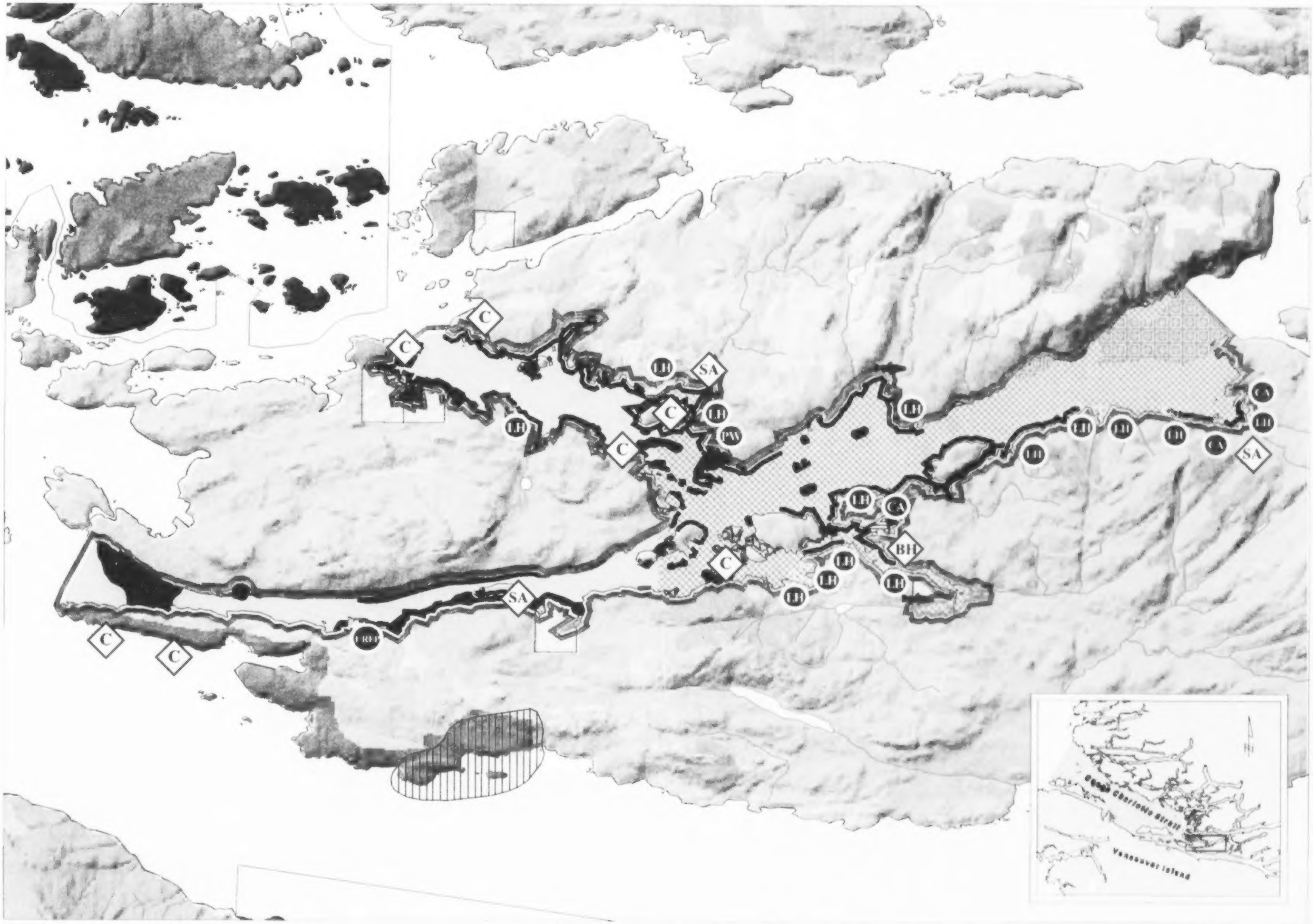
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain recreation and conservation values.
- Tenure applicants are encouraged to develop working relationships with Tlowitsis First Nation.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Management plans for commercial recreation operations should attempt to reflect consultation with First Nations to avoid harm to sensitive cultural sites.
- Maintain *Land Act* Notation of Interest over Potts Lagoon boat haven.
- New tenures should not impede safe anchorage at Bones Bay, Walden Island and Caution Cove
- Foreshore tenures at western extent of Baronet Passage should not interfere with seine fishery shore tie-ups.
- New tenures should not alienate recorded commercial dive fishery sites.

- Commercial and industrial use applications within Beware Passage should be referred to CWS.
- Opportunities should be maintained for beach use for commercial and public recreation.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

9 - Clio Channel (Conservation)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Kilometres

December 2002

Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

Note: Some data may not be accurate at the scale depicted

Unit 10. Boat Bay

Marine Area	659 ha	**Shoreline**	20.8 km
Substrate	sand	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	moderate		

Management Emphasis - Recreation

Description

The unit forms the entrance to Johnstone Strait, and experiences high recreation and tourism use as well as use for whale research activities.

Unit Attributes

- Most of this unit is significant for waterfowl and alcids, and is a CWS area of interest
- Moderate invertebrate values
- Orca primary use area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Kelp beds (1 identified – 60 ha)
- Part of migratory route for mainland inlet pink salmon and Gulf of Georgia chinook salmon
- This unit and adjacent upland were proposed as Boat Bay Goal 2 protection area by CCGAT in CCLRMP process; only upland now in CCLRMP terms of reference
- Finfish aquaculture potential: OA 1
- Tlowitsis traditional territory

Current Uses & Activities

- Fist Nations: Food fishery and gathering areas throughout unit
- Remote campsites
- UREP/ Recreation Notation of Interest
- Trail on Boat Bay upland supports recreation and wildlife viewing activities
- Kayaking destination area; kayaking routes throughout
- Boat havens at Growler Cove (under *Land Act* Notations of Interest) and Boat Bay (under *Land Act* UREP Notation of Interest).
- Sport salmon, ground fisheries; crab fishery
- Commercial salmon troll, gillnet, seine fisheries; prawn fishery

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development
- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

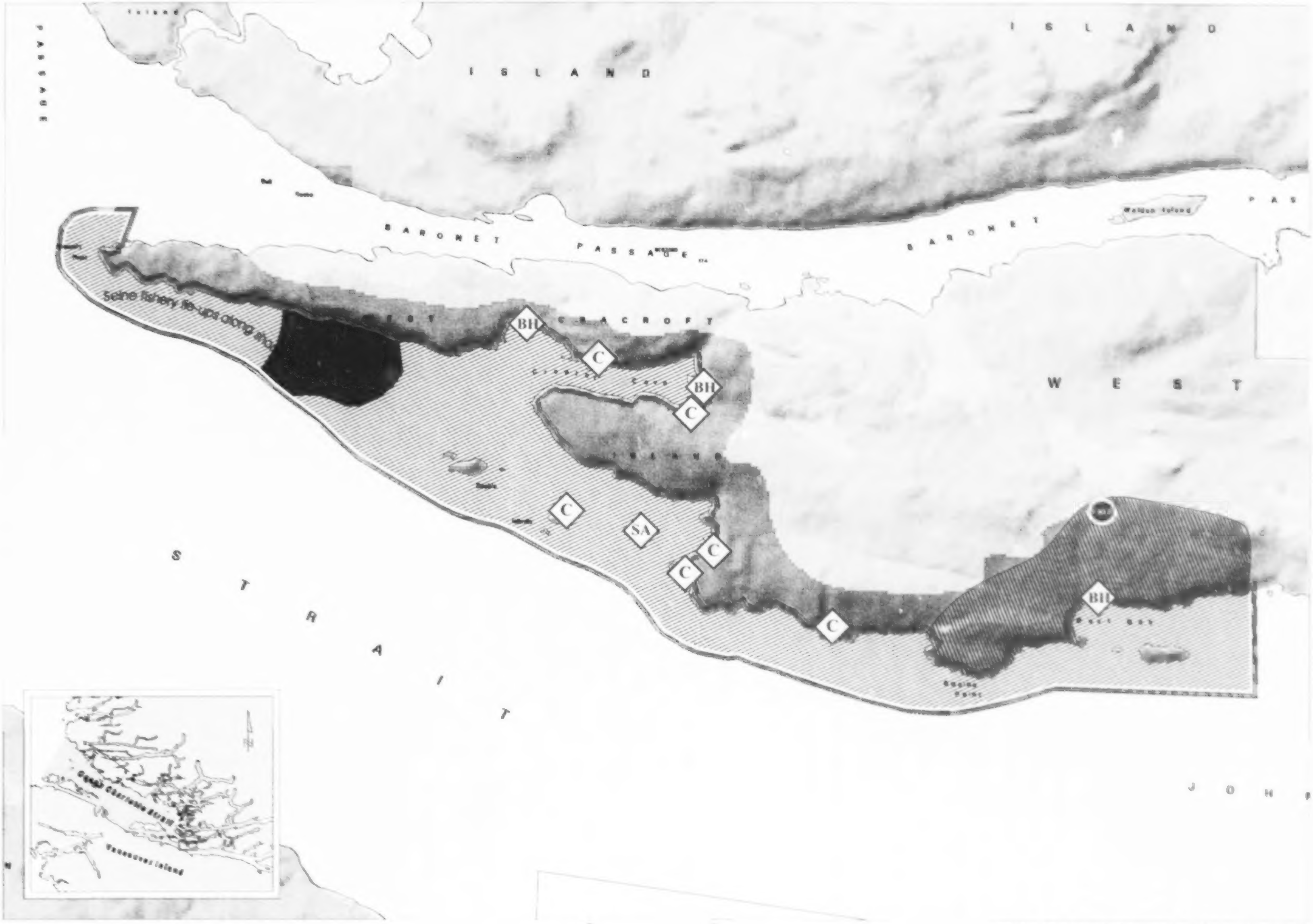
- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to promote uses and activities compatible with adjacent upland conservation areas, and to provide a focal point to reduce the impact of seasonal recreational boating traffic on Robson Bight Ecological Reserve. It should be further assessed as a marine protection candidate.
- Place entire unit under *Land Act* Notation of Interest (including Boat Bay and Growler Cove boat havens) in favour of WLAP for marine conservation and recreation purposes.
- Tenure applicants are encouraged to develop working relationships with Tlowitsis First Nation.
- New tenures should not preclude opportunities for the seine fishery shore tie-ups in vicinity of Cracroft Point.
- Uses should be compatible with any future protection area planning or designation of adjacent upland.
- The regional district should address local recreational interests in its review of tenure referrals.
- Management plans for commercial recreation guiding operations should attempt to reflect consultation with Tlowitsis First Nation to avoid harm to sensitive cultural sites.
- MSRM & LWBC should work with affected groups, the regional district and the Tlowitsis First Nation to develop a strategy for management and allocation of campsites in this unit for both recreational and tourism uses.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

10 - Boat Bay (Recreation)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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

Kilometres
December 2002

Note: Some data may not be accurate
at the scale depicted

Unit 11. Mamalilikula

Marine Area	1677 ha	**Shoreline**	69.6 km
Substrate	hard	**Slope**	flat
Exposure	low	**Depth**	shallow (0-5m) to mid- depth (50-200 m)
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - Conservation

Description

The area features extensive kelp beds and bird habitat.

Unit Attributes

- The northwest side of Village Island is a significant habitat for migratory waterfowl and shorebirds (Common Murres, gulls, Rhinoceros Auklets, Forktailed Storm-petrels, phalaropes) and is a CWS area of interest
- Kelp beds (16 identified – 210 ha)
- Intertidal clams (10 beaches – 55 ha)
- Moderate to high invertebrate values
- Part of salmon migration route
- Salmonid Stream: 1 observed
- Holding area for salmon smolts
- Herring spawning (12 spawns recorded)
- Orca summer resting & feeding, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Humpback Whale resident area: provincially blue listed species
- Harbour Porpoise area: provincially blue-listed species
- Numerous small eelgrass beds (Harbledown Island, Mound Island, Mink Pt. – Canoe Passage)
- Non-native cultural features (2)
- Finfish aquaculture potential: OA 1 (near Blackfish Sound and north of Village Island)
- Good to moderate clam and oyster beach aquaculture potential (scattered)
- Good off bottom oyster capability (western half of unit)
- Traditional territory of Mamalilikula
- Adjacent Indian Reserves at Compton Island, Dead Point, and Mamalilikula
- Private upland eastern shore of Native anchorage

Current Uses & Activities

- First Nations: Extensive fishing and shellfish harvest areas throughout with culturally significant areas along shoreline of Village Island
- Remote campsites
- Commercial wharf
- Kayaking destination area; kayaking routes throughout
- Safe anchorage at Mamalilikula
- Salmon farms (2) including 1 slated for relocation
- Log dump

- Sewer/effluent line
- Sport salmon, ground fishery, crab fishery
- Commercial salmon fishery; prawn, shrimp, crab fisheries

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- • Marine Telecommunications & Utilities
- • Rural Development

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- ✓ General Commercial

Aquaculture:

- • Finfish
- X Marine Plant
- ✓ Shellfish Beach
- X Shellfish Deep Water Aquaculture

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation

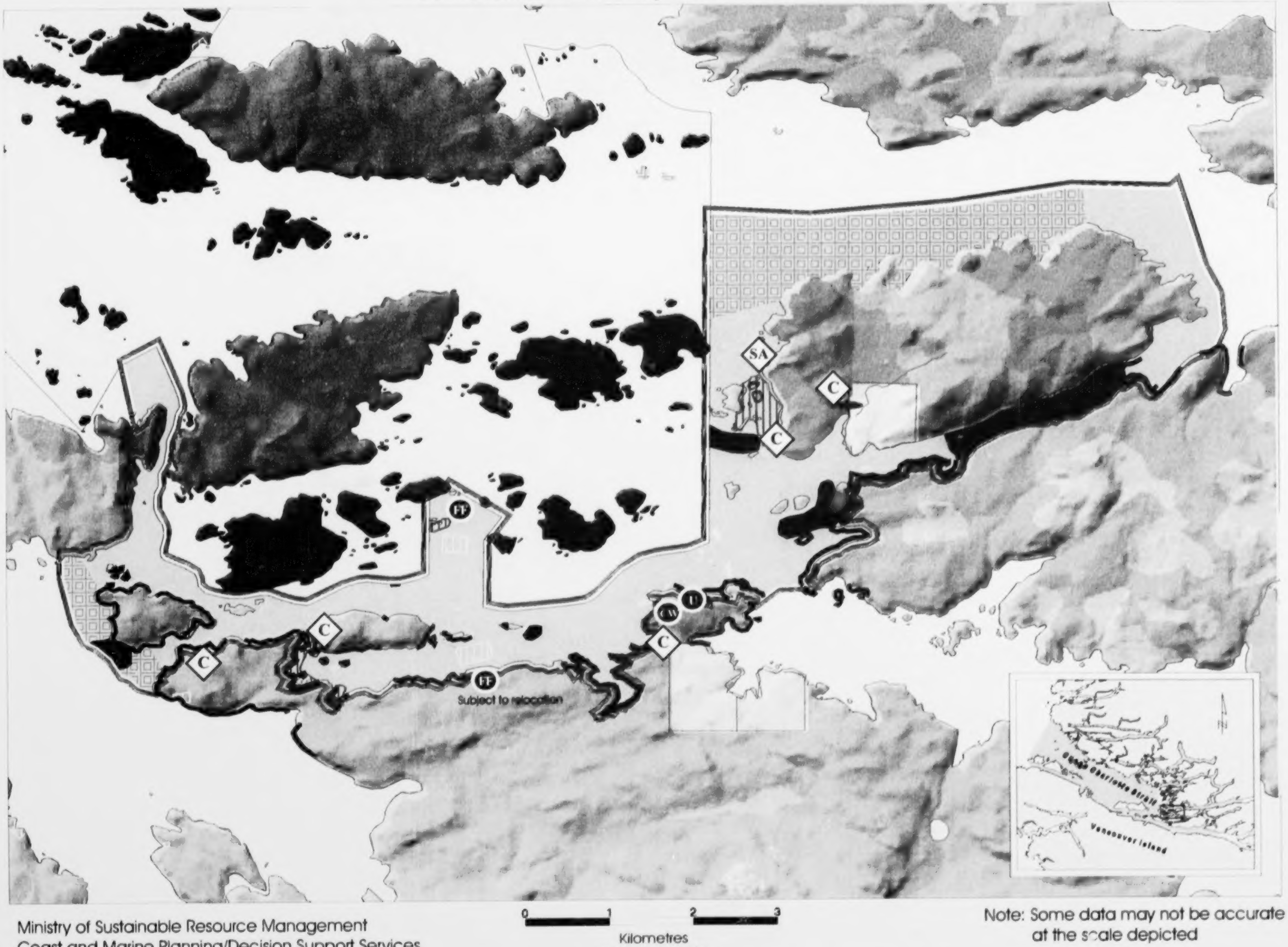
- ✓ First Nations
- ✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- The unit should be managed to maintain habitat for kelp beds, clam beaches and herring spawn areas.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- New tenures should not impede safe anchorage at Mamalilikula.
- New tenures should not alienate recorded commercial dive fishery sites.
- Opportunities should be maintained for beach use for commercial and public recreation.
- Commercial and industrial use applications along the northwest side of Village Island should be referred to CWS.
- Finfish aquaculture tenure modification may be approved to accommodate anchoring requirements and/ or waste management regulation requirements, which include fallow sites.

11 - Mamalilakulla (Conservation)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December 2002

Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

Note: Some data may not be accurate at the scale depicted

Unit 12. Port Elizabeth

Marine Area	933 ha	**Shoreline**	26.0 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis – General Marine

Description

The area is characterized by low exposure, low current and warm water with a number of log handling sites.

Unit Attributes

- Head of Port Elizabeth is significant waterfowl habitat (Goldeneye, Mallards) and is a CWS area of interest.
- Kelp beds (2 identified – 47 ha); eelgrass beds in Duck Cove
- 3 salmon streams (local knowledge)
- Holding areas for adult salmon
- High value area for prawn, shrimp
- Historically documented herring and eulachon larval rearing area (local knowledge)
- Intertidal Clams (3 beaches – 50 ha)
- Moderate beach oyster capability (1 site)
- Good off bottom oyster capability throughout unit
- Finfish aquaculture potential: OA 1 (except Duck Cove & Maple Cove)
- Forest industry has identified potential log dump sites northwest of Duck Cove
- Mamalilikula traditional territory

Current Uses & Activities

- First Nations: Shellfish areas along inlet entrance. Fishing grounds towards Duck Cove
- Salmon farm
- Log dumps (2), log handling & storage (2), heli-log site (1); upland logging camp
- Safe anchorage at Duck Cove
- Sport ground fishery
- Commercial prawn, shrimp, crab fisheries

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- ✓ Finfish
- X Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

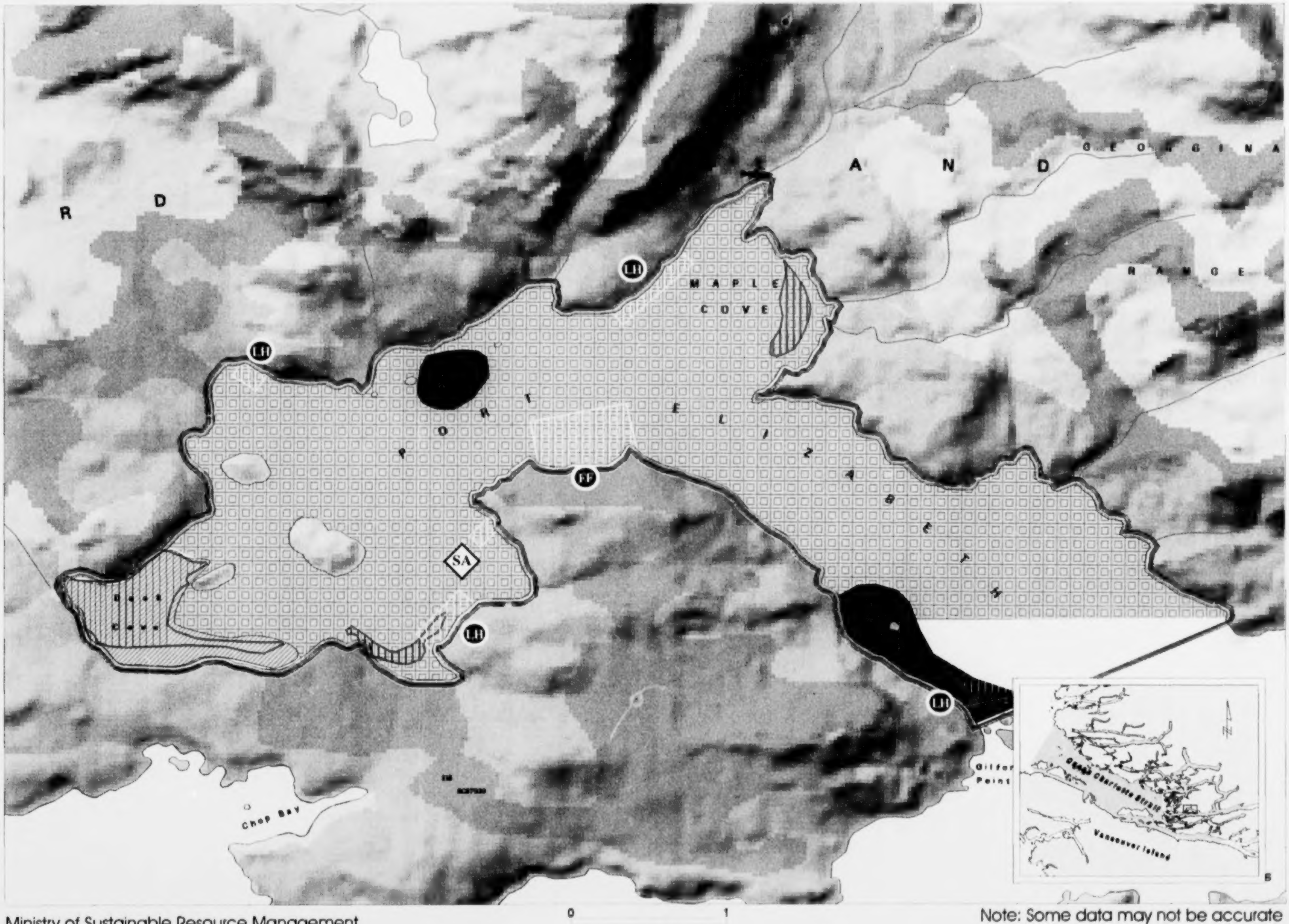
Code

✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain opportunities for existing tenured activities, and new activities only where compatible with biological values.
- New tenures should not impede safe anchorage at Duck Cove.
- New tenures should not alienate recorded commercial dive fishery sites.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- Commercial and industrial use applications within 1 km of the head of Port Elizabeth should be referred to CWS.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

12 - Port Elizabeth (General Marine)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December 2002

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Coast and Marine Planning/Decision Support Services

Note: Some data may not be accurate at the scale depicted

Unit 13. Knight Inlet

Marine Area	11315 ha	**Shoreline**	126.6 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis – General Marine

Description

The area is characterized by low exposure, low currents and a number of log handling sites and commercial uses. Strong outflow winds, freshwater influence and salmon migration routes provide natural constraints on many uses.

Unit Attributes

- The unit contains three areas of significance for migratory birds: Batt Bluff, Lady Islands and the western entrance to Knight Inlet (Common Murres, gulls, Rhinoceros Auklets, Forktailed Storm-petrels, phalaropes , Lull Bay (Goldeneyes, gulls, Marbled Murrelets, scoters), and Steep Head (Cormorant roosting site). These are CWS areas of interest.
- Area of high biological and physical diversity in vicinity of Hoeya Head
- Kelp beds (1 identified – 52 ha); eelgrass at Lull Bay, Tsakonu Cove, Hoeya Sound (local knowledge)
- Moderate to High invertebrate values
- Intertidal Clams (6 beaches – 8 ha)
- Salmonid Streams: 15 observed, 18 assumed
- Major salmon migration routes; salmon fry holding area; juvenile migration especially Glendale Pink salmon and Klinaklini/ Ahnuahti Chinook, Coho, Pink, Summer Chum salmon (local knowledge)
- Estuary (19 ha)
- Significant herring migration; eulachon migration March to mid-April (local knowledge)
- Orca summer resting feeding, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Humpback Whale resident area: provincially blue listed species
- Pacific White Sided dolphin residency (up to 100 animals) (local knowledge)
- Non-native cultural feature
- Finfish aquaculture potential: OA 2 (isolated pockets of OA 1: Tsakonu Cove, Clapp Pass, Spring Passage)
- Good off bottom oyster capability (Gilford Point to Lady Islands)
- Forest industry has identified potential log dump sites at Gilford Island, north and south shores of inlet east of Sargeaunt Passage
- Traditional territory of Tlowitsis, Mamalilikula, and Da'Naxda'Xw First Nations
- Private upland on Shewell Island

Current Uses & Activities

- First Nations: Fishing grounds along entrance with shellfish areas past Tribune Channel entrance. Extensive areas of cultural significance along inlet.
- Salmon farm
- Log handling and storage (26), camp tie-ups, heli-log sites
- Tidal sports fishing camp

- Marina
- Safe anchorage at Tsakonu Cove and Hoeya Sound
- Remote campsites
- Commercial salmon troll, gillnet, seine fishery, crab fishery, prawn fishery and hook and line ground fishery
- Sport salmon, ground fishery

Acceptable Uses & Activities

Tenured Uses

X Community & Public Institutional
X Light Industrial
X Marine Telecommunications & Utilities
X Rural Development

Aquaculture:

• Finfish
X Marine Plant
X Shellfish Beach
✓ Shellfish Deep Water Aquaculture

✓ Conservation
✓ Log Handling, Storage & Infrastructure
✓ Private Moorage
✓ General Commercial

Commercial Recreation:

✓ Lodges and Base Camps
✓ Guiding Operations

Ongoing Non Tenured Activities

✓ Commercial Fisheries
✓ Marine Transportation
✓ First Nations
✓ Public Recreation

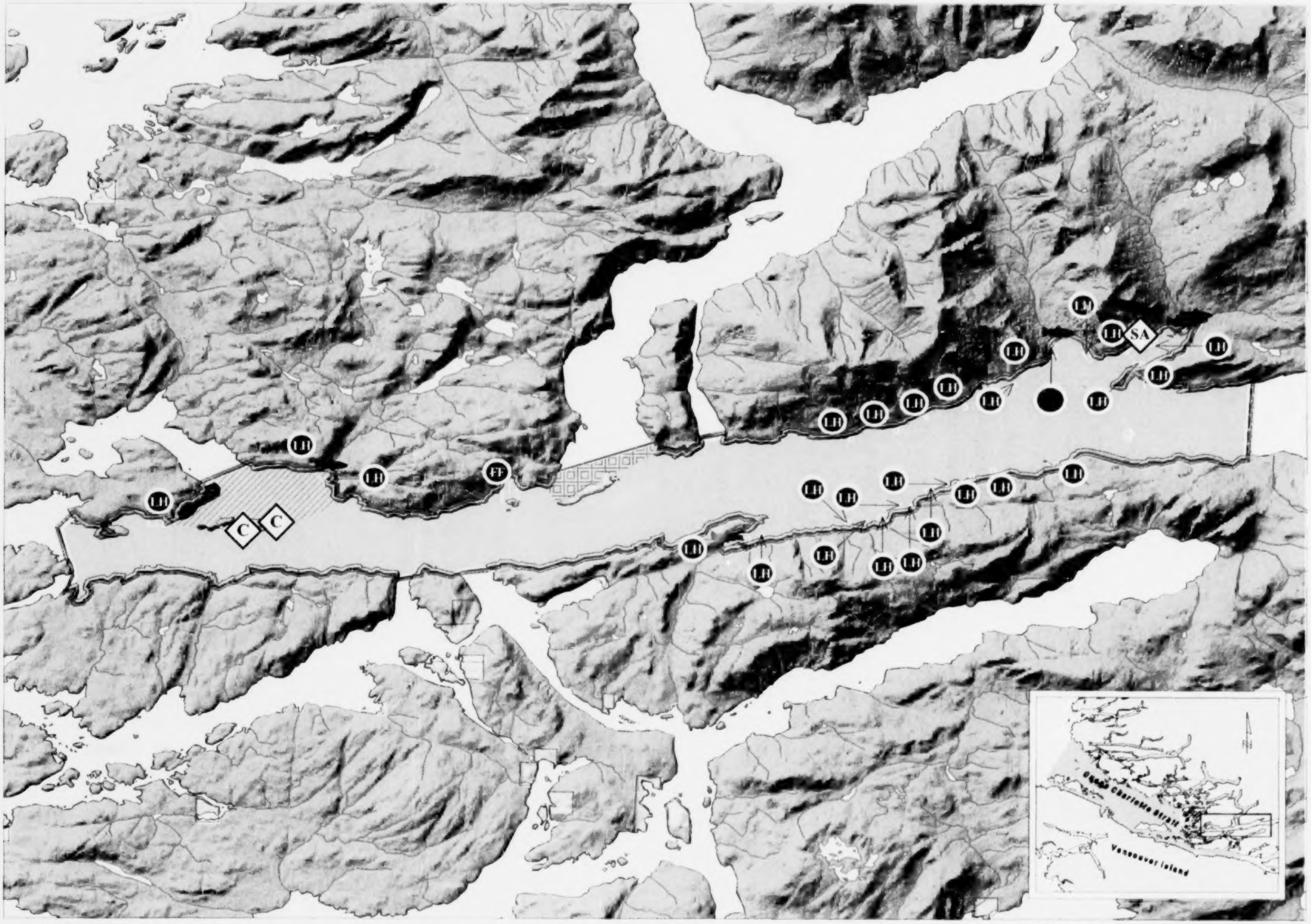
Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain opportunities for existing activities and tenures, while minimizing impact on salmon migration activities and avoiding conflicts with commercial prawn and crab fisheries.
- Tenure applicants are encouraged to develop working relationships with Tlowitsis and Mamalilikula First Nations.
- Management plans for commercial recreation operations should attempt to reflect consultation with First Nations to avoid harm to sensitive cultural sites.
- Tenure holders should work with First Nations to coordinate log handling activities during eulachon and salmon runs.
- New tenures should not impede safe anchorage at Hoeya Sound and Tsakonu Cove.
- New tenures should be designed and located to avoid impact on eulachon runs (March 1 to May 15).
- New tenures should not alienate recorded commercial dive fishery sites.
- Finfish aquaculture tenure modification may be approved to accommodate anchoring requirements and/ or waste management regulation requirements, which include fallow sites.

- Commercial and industrial use applications within 1km of the western end of the unit, Lull Bay, and Steep Head should be referred to CWS.

13 - Knight Inlet (General Marine)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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

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Kilometres
December 2002

Note: Some data may not be accurate at the scale depicted

Unit 14. East Broughton

Marine Area	3916 ha	**Shoreline**	130.2 km
Substrate	hard	**Slope**	flat
Exposure	low-moderate	**Depth**	photic
Current	low	**Benthic Summer Temp**	warm
Roughness	moderate		

Management Emphasis - Conservation

Description

The unit contains several sheltered passages. The unit is adjacent to existing Broughton Archipelago provincial park land and temporary Order in Council protection areas resulting from CCLRMP. It is a highly popular seasonal recreational area.

Unit Attributes

- CWS areas of interest: Spring Passage, Health Bay & Shoal Bay are significant habitat for migratory waterfowl, alcids, and shorebirds (scoters, Cormorants, Marbled Murrelets, American Widgeon, diving ducks, mallards, Common and Barrow's Goldeneyes). The mouth of Knight Inlet is significant migratory waterfowl and shorebird habitat (Common Murres, gulls, Rhinoceros Auklets, Forktailed Storm-petrels, phalaropes). Ridge Rocks & Seabreeze Island are Black Oyster Catcher and Glaucous-Winged Gull breeding sites.
- Kelp beds (13 identified – 63 ha); eelgrass at False Cove and Health Bay (local knowledge)
- Moderate to high invertebrate values
- Intertidal Clams (41 beaches – 127 ha)
- Orca summer resting, winter feeding area, migration through southern extent of unit: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Humpback Whale resident area: provincially blue listed species
- Resident Harbour Porpoise area: provincially blue-listed species
- Salmon migration route
- Salmon Streams: 4 documented (local knowledge), 6 assumed
- Herring spawning (23 spawns recorded)
- This unit and adjacent upland areas were proposed as Goal 1 protection area (Broughton Extension) by CCGAT in CCLRMP process; only upland now in CCLRMP terms of reference
- Upland areas recently established as temporary OIC protection areas until June 30, 2003
- Finfish aquaculture potential: OA 1(isolated opportunities- primarily Retreat Passage)
- Moderate off bottom scallop and clam capability (Retreat Pass)
- Good beach clam and oyster capability in Health Bay
- Forest industry has identified potential log dump sites south of False Cove & north shore of Kramer Passage
- Traditional territories of Mamalilikula, Tsawataineuk, Kwicksutaineuk/Ah'K'waha'
- Adjacent Indian Reserves (3)
- Echo Bay Marine Park (Cramer Passage)

Current Uses & Activities

- First Nations: Some shellfish harvest and fishing areas. Culturally significant areas along Gilford Island.

- Whale watching activities
- Boating destination area; kayaking destination area; kayaking routes throughout
- Boat Haven at Bootleg Cove
- Safe anchorage at Health Bay
- Year round commercial tenures (3)
- Public wharf (1)
- Other tenures (4)
- Salmon farms (7) with 1 slated for relocation
- Log handling and storage (2)
- Sport salmon, ground fishery and crab fishery; prawn and shrimp fishery
- Commercial salmon troll fishery; prawn, shrimp and crab fisheries

Acceptable Uses & Activities

Tenured Uses

• Community & Public Institutional
X Light Industrial
O Marine Telecommunications & Utilities
X Rural Development

✓ Conservation
✓ Log Handling, Storage & Infrastructure
X Private Moorage
• General Commercial

Aquaculture:

• Finfish
X Marine Plant
X Shellfish Beach
X Shellfish Deep Water Aquaculture

Commercial Recreation:

X Lodges and Base Camps
O Guiding Operations

Ongoing Non Tenured Activities

✓ Commercial Fisheries
✓ Marine Transportation

✓ First Nations
✓ Public Recreation

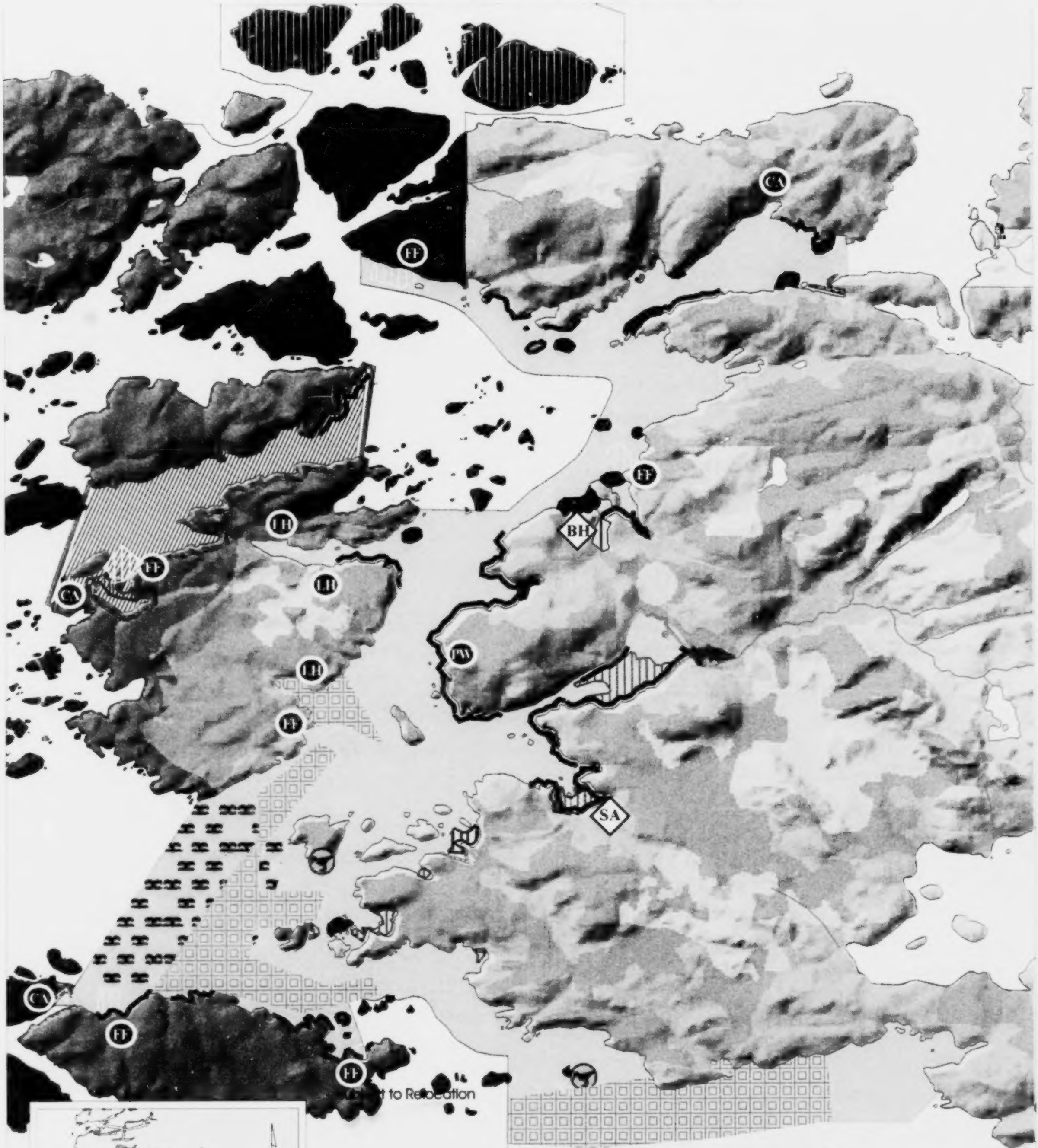
Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to promote the conservation of biological values, and the recreational activities which are largely dependent on these values. Portions of this unit should be further assessed as a marine protection candidate.
- Place Joe Cove, Arrow Passage, Spring Passage, Swanson Passage and the foreshore of: Eden Island; Midsummer Island and Crease Island under *Land Act* notation of interest in favour of WLAP for marine conservation and recreation purposes. Consider use of *Land Act* map reserve if outcome of CCLRMP decision on upland is permanent protection status.

- Licenses or permits for commercial recreation guiding use of this unit are conditional on operating practices that follow established guidelines and / or performance based standards for minimizing impacts on bird colonies and migratory bird habitat.
- Uses should be compatible with any future protection area planning or designation of adjacent upland.
- Establish *Land Act* Notation of Interest over Bootleg Cove boat haven.
- New tenures should not impede safe anchorage at Health Bay.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- All applications for use in / within 1km of bird colonies and estuaries should be referred to CWS.
- New tenures should not alienate recorded commercial dive fishery sites.
- Finfish aquaculture tenure modification may be approved to accommodate anchoring requirements and/ or waste management regulation requirements, which include fallow sites.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

14 - East Broughton (Conservation)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Coast and Marine Planning/Decision Support Services

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Kilometres
December 2002

Note: Some data may not be accurate at the scale depicted

Unit 15. Burdwood Group

Marine Area	852 ha	**Shoreline**	19.3 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	moderate		

Management Emphasis - Recreation

Description

The unit contains a group of compact islands with significant cultural and recreational values.

Unit Attributes

- Kelp beds (1 identified – 6 ha)
- Juvenile, adult holding area and migration route for salmon; close to major Chum salmon holding area in Viner Sound (local knowledge)
- Moderate to high invertebrate values
- Intertidal Clams throughout (3 beaches confirmed – 3 ha)
- Orca summer resting, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Important for white sided dolphins, harbour porpoises: Harbour Porpoises are a provincially blue-listed species
- This unit and adjacent upland were proposed as Burdwood Goal 2 protection area by CCGAT in CCLRMP process; only upland now in CCLRMP terms of reference
- Finfish aquaculture potential: OA 1
- Moderate off bottom scallop capability (entire area)
- Traditional territory of Tsawataineuk and Kwicksutaineuk/Ah'K'waha'
- Cultural Heritage/Archaeological sites identified (9)

Current Uses & Activities

- First Nations: extensive shellfish areas throughout
- Kayak route around unit; sheltered anchorages
- Remote campsites
- Salmon farm (1)
- Sport salmon fishery, shrimp fishery
- Commercial salmon troll, gillnet, seine fisheries, prawn fishery
- Main marine transport route through northwest

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- ● Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

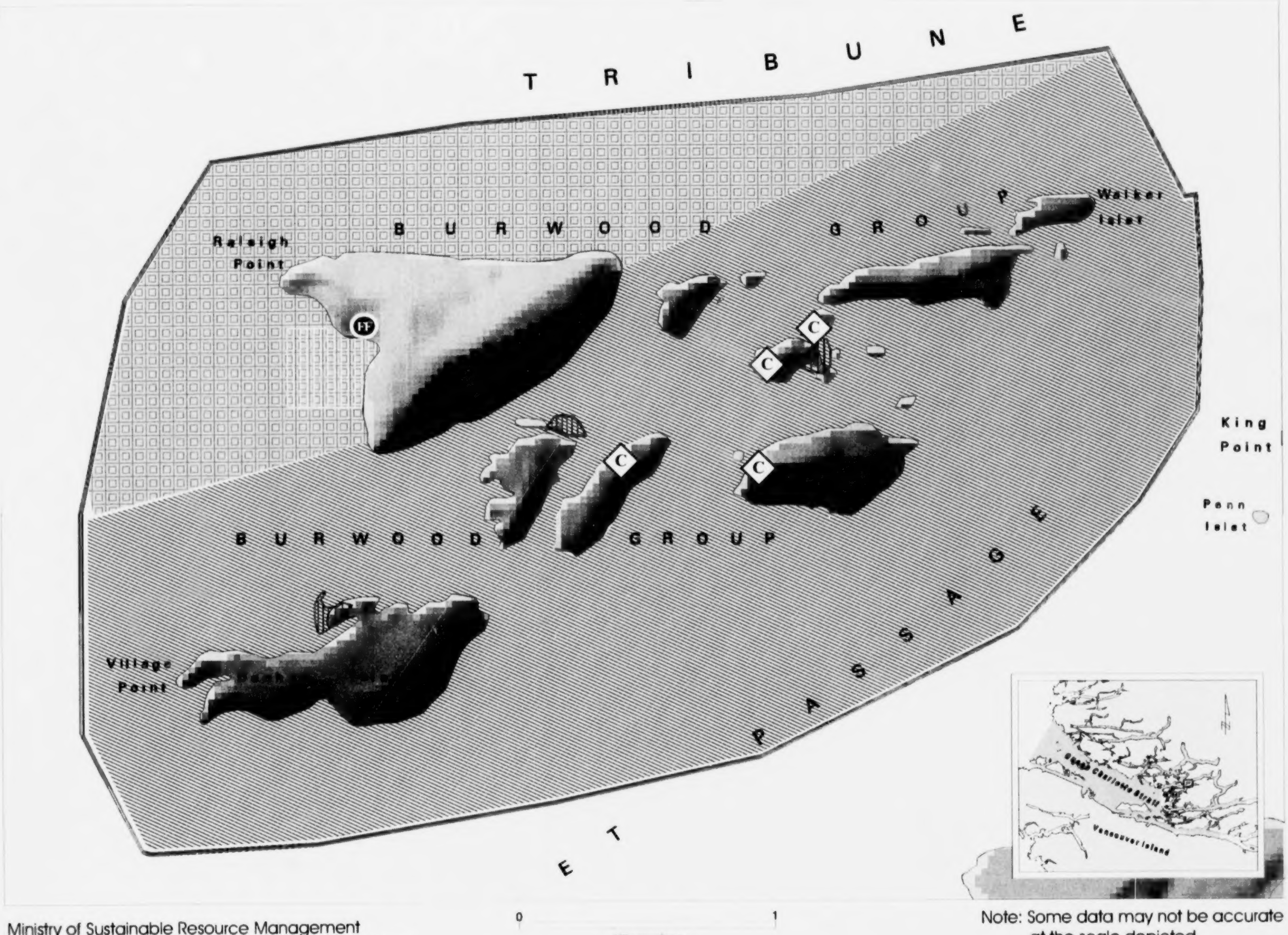
- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
●	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to ensure recreation and commercial recreation avoid impacts to First Nation cultural heritage values and archeological sites. It should be further assessed as a marine protection candidate.
- Place entire unit under *Land Act* notation of interest in favour of WLAP for marine conservation and recreation purposes.
- Tenures to be managed to minimize interference with seasonal public recreation activities including shellfish harvesting and access to upland campsites.
- Uses should be compatible with any future protection area planning or designation of adjacent upland.
- New tenures must be located and managed to avoid impact to cultural heritage/archeological values.
- New tenures should be located and managed to minimize disturbance to onshore bird rookeries.
- New tenures should not alienate recorded commercial dive fishery sites.
- The regional district should address local recreational interests in its review of tenure referrals.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Finfish aquaculture tenure modification may be approved to accommodate anchoring requirements and/ or waste management regulation requirements, which include fallow sites.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

15 - Burdwood Group (Recreation)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December 2002

Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

Note: Some data may not be accurate at the scale depicted

Unit 16. Echo Bay

Marine Area	1654 ha	**Shoreline**	50.2 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - Community

Description

The unit contains intensive shoreline settlement activities and development uses.

Unit Attributes

- Kelp beds (1 identified – <1 ha); eelgrass in Shoal harbour, Viner Sound (local knowledge)
- Moderate to high invertebrate values, higher values at head of Viner Sound
- Intertidal Clams (2 beaches – 2 ha)
- Salmonid Streams; 13 observed, 8 assumed
- Migratory salmon route; adult holding area; Viner Sound is major Chum salmon adult & juvenile holding area
- Herring spawning (11 spawns recorded)
- Orca summer resting, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally, (T) and imperiled provincially. They are provincially red-listed.
- Humpback Whale resident area: provincially blue listed species
- Harbour Porpoise area: provincially blue-listed species
- Finfish aquaculture potential: OA 1 (limited)
- Good to moderate off bottom scallop and oyster capability (throughout)
- Forest industry has identified potential log dump sites throughout unit.
- Traditional territories of Tsawataineuk and Kwicksutaineuk/Ah'K'waha'
- Adjacent Indian Reserve at Meetup

Current Uses & Activities

- First Nations: fishing areas and areas of cultural significance
- Log handling and storage sites (1); heli-log sites, camp tie-up, upland logging camp,
- Marina (2)
- Wharf (1)
- Fishery facility (1)
- Year round commercial tenures (6)
- Other tenures (2)
- Private moorage (4)
- Remote campsite
- Boat Haven at Shoal Harbour (under *Land Act* Notation of Interest)
- Safe Anchorage at Viner Sound
- Sport salmon, ground fishery, crab fishery (Shoal Harbour)
- Commercial prawn fishery, crab fishery (Viner Sound)

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- ✓ Marine Telecommunications & Utilities
- ✓ Rural Development

Aquaculture:

- X Finfish
- ✓ Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- ✓ General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

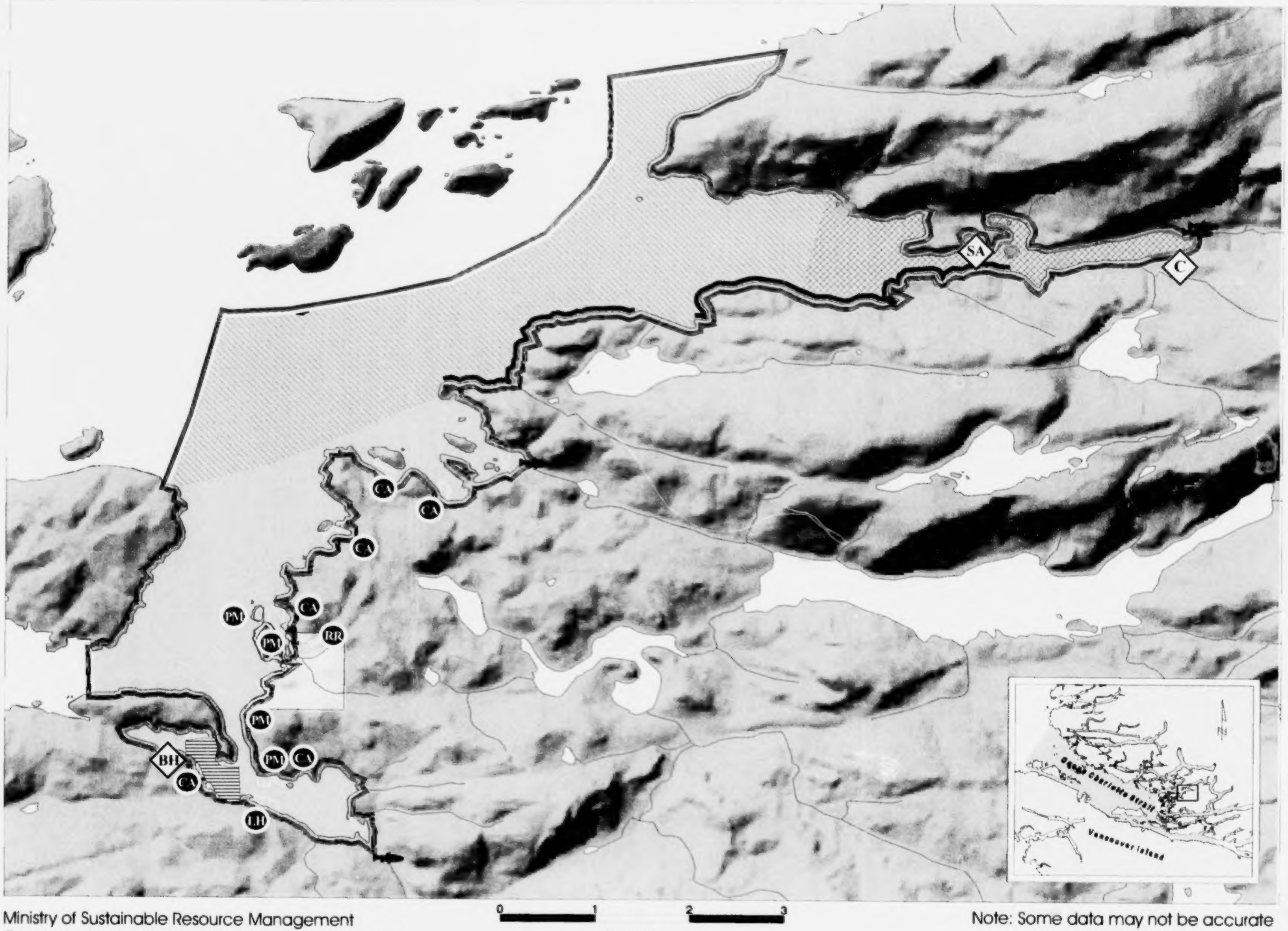
- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate existing development.
- Maintain *Land Act* Notation of Interest over Shoal Harbour boat haven.
- New tenures should not impede safe anchorage at Viner Sound.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- New tenures and development in Viner Sound should be limited to uses compatible with the area's recreation and conservation values.
- New tenures should not alienate recorded commercial dive fishery sites.

16 - Echo Bay (Community)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Kilometres
December 2002

Ministry of Sustainable Resource Management
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at the scale depicted

Unit 17. Tribune North

Marine Area	2620 ha	**Shoreline**	34.5 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	Warm
Roughness	low		

Management Emphasis – Recreation

Description

The unit is a long, steep passageway with limited beaches and moderate development activity.

Unit Attributes

- CWS area of interest: Watson Cove is a significant waterfowl habitat (Surf Scoters); Pelagic Cormorant, Glaucous-winged Gull and Pigeon Guillemot nesting colony at Deep Sea Bluff
- Kelp beds (1 identified – 3 ha)
- Orca summer resting, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Humpback Whale resident area: provincially blue listed species
- Harbour Porpoise habitat – year round: provincially blue-listed species
- White sided dolphins in area
- Salmon migration route; juvenile and adult salmon holding area (local knowledge)
- Salmon streams (local knowledge)
- Herring spawn at Rainy Point (local knowledge)
- High prawn values
- Scenic waterfalls in and west of Watson Cove
- Finfish aquaculture potential: OA1 throughout
- Moderate off bottom scallop and oyster capability at west end of unit
- Forest industry has identified potential log dump sites along entire south shore & half of north shore
- Traditional territory of Tsawataineuk and Kwicksutaineuk/Ah'K'waha'

Current Uses & Activities

- First Nations: Fishing areas throughout with one shellfish harvest area at entrance
- Salmon farms (2)
- Log dump (1), heli-log sites
- Commercial prawn, shrimp, salmon troll, gillnet and seine fisheries
- Marine transport and navigation route (CCG)

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development
- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Aquaculture:

- • Finfish
- ✓ Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

Commercial Recreation:

- ✓ Lodges and Base Camps
- O Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

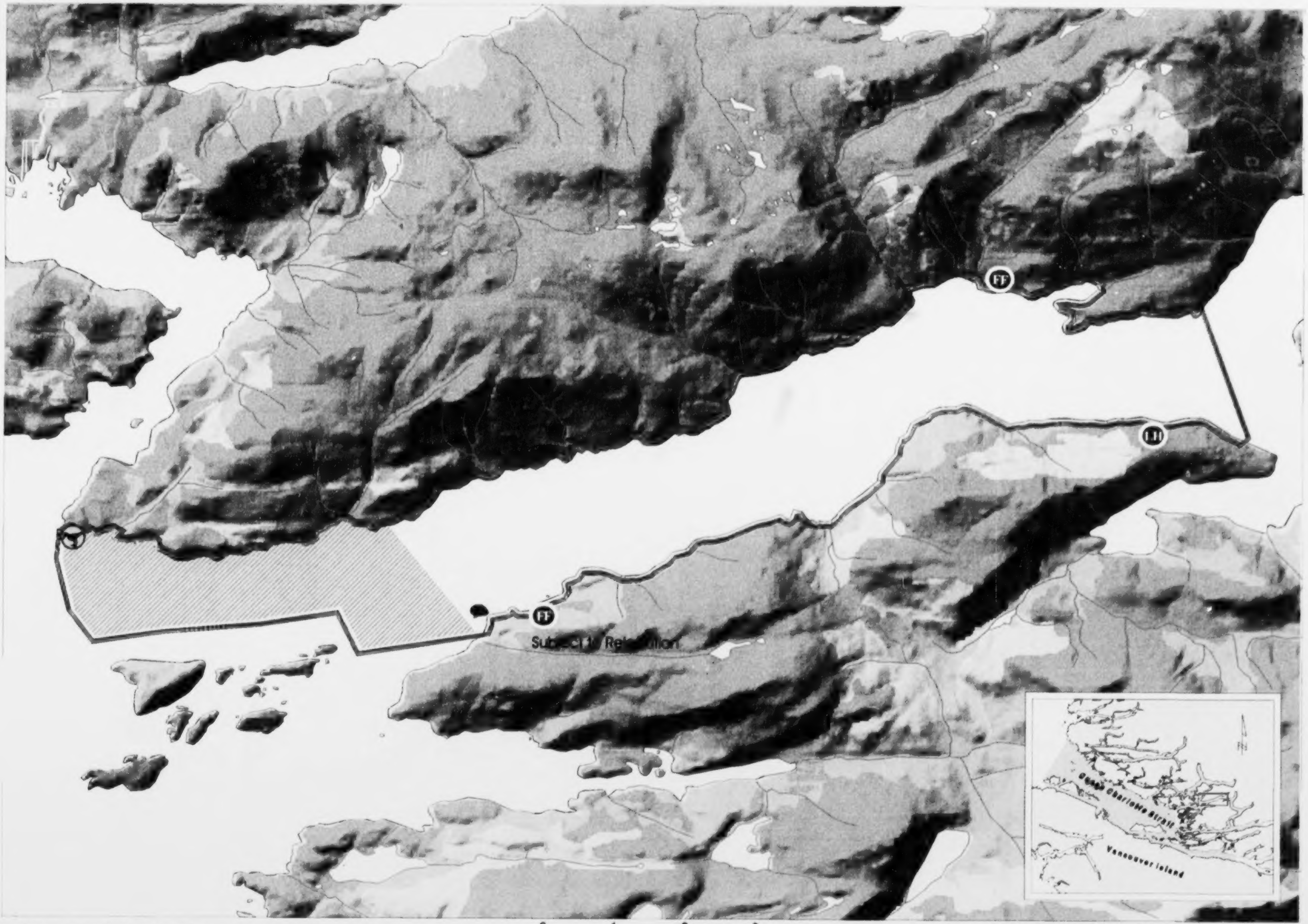
Code

✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain its potential as a recreational boating corridor between the Broughton Archipelago provincial park and the Ahta/Ahnuhati upland protection area while accommodating compatible development.
- Licenses or permits for commercial recreation guiding use of this unit are conditional on operating practices that follow established guidelines and / or performance based standards for minimizing impacts on bird colonies and migratory bird habitat.
- Log tow operators are encouraged to avoid prawn trap fishery areas.
- Finfish aquaculture tenure modification may be approved to accommodate anchoring requirements and/ or waste management regulation requirements, which include fallow sites.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- All applications for use within 1km of bird colonies should be referred to CWS.

17 - Tribune North (Recreation)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Coast and Marine Planning/Decision Support Services

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Kilometres
December 2002

Note: Some data may not be accurate
at the scale depicted

Unit 18. Bond Sound / Kwatsi Bay

Marine Area	2163 ha	**Shoreline**	41.9 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	Warm
Roughness	low		

Management Emphasis - Recreation

Description

The unit contains steep-sided inlets with few beaches, and accommodates a variety of dispersed tenured uses. It does not include the Bond Sound estuary.

Unit Attributes

- The head of Kwatsi Bay and the head and eastern half of Bond Sound are migratory waterfowl habitat Goldeneye, Scoters, Scaup, dabbling ducks, Bonaparte's Gulls, Red-necked Grebes and Red-breasted Mergansers)and are CWS areas of interest
- Eelgrass in all stream estuaries (local knowledge)
- Salmon Streams: 15 observed, 24 assumed
- Salmon holding area in Kwatsi and Bond; major migration route for all species into Bond Sound from Kakweiken and Thompson; salmon fry in all Bond Sound streams (local knowledge)
- Significant herring spawning in area (3 spawns recorded); especially head of Bond Sound to Brown Point (local knowledge)
- Orca summer resting, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed
- Harbour seals and Harbour Porpoisearea: Harbour Porpoise is provincially blue-listed
- High to moderate invertebrate values
- Non-native cultural feature (1)
- Adjacent Ahta- Ahnuhati area established as temporary Order In Council protection area under CCLRMP process until June 30, 2003; Bond Sound estuary being addressed in CCLRMP.
- High recreation and tourism value of Bond Sound due to unmodified landscape
- Recreational trail from estuary to alpine area; pictographs and waterfall
- Kwatsi Bay waterfalls and trail
- Finfish aquaculture potential: OA 1 (except Bond Sound; OA 2 along western shore only)
- Good off bottom scallop and oyster capability (Kwatsi Bay)
- Forest industry has identified potential log dump sites at Gilford Island & south shore of Bond Sound
- Kwicksutaineuk/Ah'K'waha' traditional territory
- Adjacent Indian Reserve at Ahta

Current Uses & Activities

- First Nations: Fishing areas extending along Miller point. Cultural significant areas through Bond Sound
- Safe anchorage at Bond Sound, Kwatsi Bay, and Wahkana Bay
- Commercial salmon troll, gillnet, seine fisheries; prawn, shrimp, crab fisheries
- Remote campsites
- Grizzly bear viewing in Ahta estuary during autumn

- Log handling and storage sites (4); Heli-log sites, camp tie-ups
- Year round commercial tenures: Kwatse Bay resort

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- ✓ Finfish
- ✓ Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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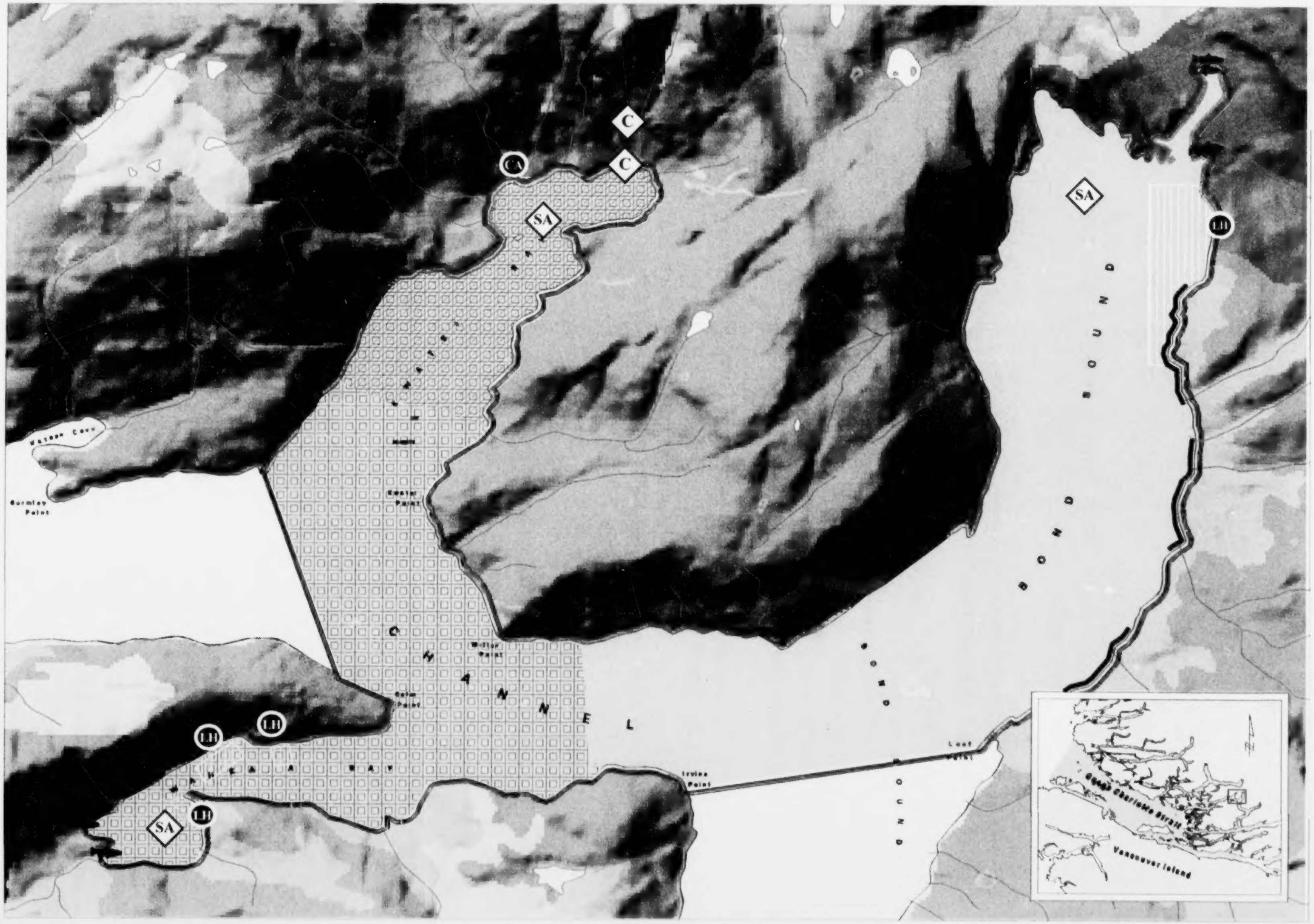
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain conservation based recreational use while accommodating a variety of other uses and activities, including marine transportation.
- Uses should be compatible with any future protection area planning or designation of estuary and adjacent upland areas.
- New tenures should be located and managed to minimize impacts to salmon habitat and herring spawning areas in Bond Sound.
- New tenures should not impede anchorage at Wahkana Bay, Bond Sound and Kwatsi Bay.
- New tenures should minimize interference with existing tourism development.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- New tenures should not alienate recorded commercial dive fishery sites.
- Limit finfish aquaculture to the Kwatsi Bay and Wahkana Bay areas.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- Commercial and industrial use applications should be referred to CWS.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

18 - Bond Sound-Kwatsi Bay (Recreation)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Ministry of Sustainable Resource Management
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Kilometres
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Note: Some data may not be accurate at the scale depicted

Unit 19. Thompson

Marine Area	1626 ha	**Shoreline**	30.0 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - General Marine

Description

The unit is a long steep-sided inlet with few beaches, most of which are occupied by log handling. The area has high value salmon habitat located at the estuary at the head of the inlet. The freshwater influence of the Kakweiken River limits finfish aquaculture opportunities.

Unit Attributes

- The head and southeastern portion of Thompson Sound is significant for migratory waterfowl (diving ducks, swans, dabbling ducks, Canada Geese, gulls) and is a CWS area of interest.
- Kelp beds (4 identified – 60 ha); eelgrass throughout head of river estuary
- Salmon Streams: 12 observed, 17 assumed
- Juvenile salmon rearing area; adult holding area; major migration route for Kakweiken salmon (local knowledge)
- High value prawn, moderate invertebrate values
- Herring spawning (22 spawns recorded)
- Orca summer resting, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Minke whale summer feeding area
- The Ahta/Ahnuhati Candidate Protection Area includes the Ahta Estuary located north of Sackville Island
- Forest industry has identified potential log dump sites throughout unit
- Finfish aquaculture potential: very limited area of OA 1
- Kwicksutaineuk/Ah'K'waha' traditional territory
- Adjacent Indian Reserve at Kakweiken
- Private upland on western shore opposite McAllister Creek

Current Uses & Activities

- First Nations: No information provided
- Commercial prawn, shrimp, crab fisheries; salmon troll, gillnet, seine fisheries
- Sport salmon fishery
- Safe anchorage at Sackville Island
- Log handling and storage (12) ; Sewage lagoon for upland logging camp, heli-log sites, heli-spots
- Light industrial tenure (1)-storage tanks
- Private moorage

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- ✓ Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- X General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
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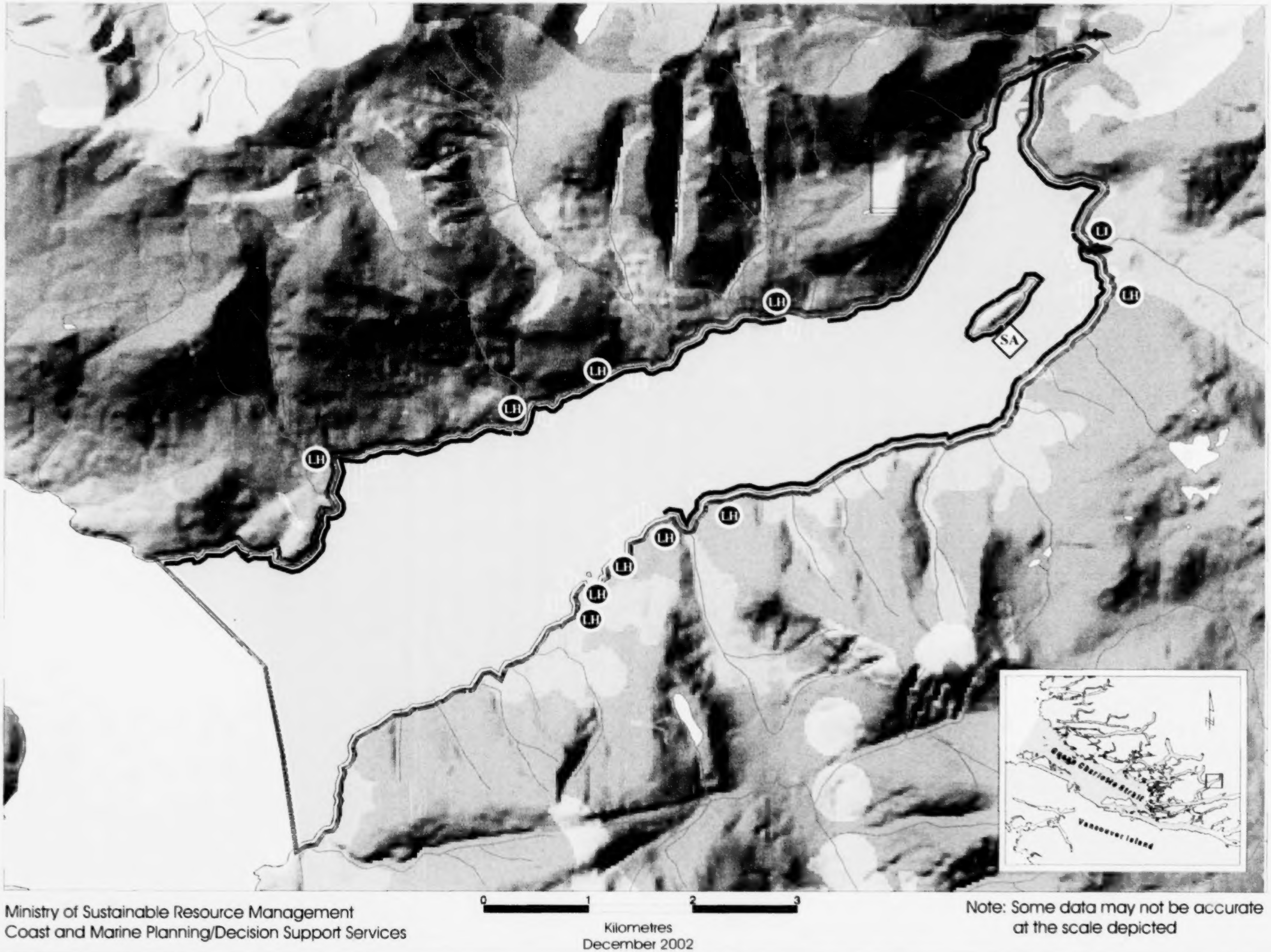
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain opportunities for log handling activities.
- New tenures should not impede safe anchorage at Sackville Island.
- New tenures should not alienate recorded commercial dive fishery sites.
- Commercial and industrial use applications should be referred to CWS for comment.

19 - Thompson (General Marine)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December 2002

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Note: Some data may not be accurate
at the scale depicted

Unit 20. Tribune South

Marine Area	1966 ha	**Shoreline**	33.0 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	moderate		

Management Emphasis – General Marine

Description

The unit comprises steep-sided channels with limited beach area. Most uses are concentrated near Sargeaunt Pass.

Unit Attributes

- Heavy eelgrass, kelp in Sargeant Pass
- Salmon holding area; juvenile salmon rearing area; salmon migration route to Kakweiken, Thompson and Glendale, especially Pink salmon (local knowledge)
- Salmon stream north of log dump in Sargeaunt Pass (local knowledge)
- Eelgrass throughout Sargeaunt Pass (local knowledge)
- Orca summer resting, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Harbour Porpoise area: provincially blue-listed species
- High prawn values
- Finfish aquaculture potential: OA 1 (throughout)
- Good off bottom scallop and oyster capability (Sargeaunt Passage)
- Forest industry has identified potential log dump sites along west shore of Tribune Channel opposite Viscount Island
- Mamalilikula traditional territory

Current Uses & Activities

- First Nations: Shellfish harvest area within Sargeaunt Passage. Crab and prawn harvesting area. Culturally significant areas towards Tribune Channel entrance.
- Log handling and storage (1), heli-log sites, heli-spot sites
- Salmon farms (2); 1 contingent upon final DFO approval
- Safe anchorages in Sargeaunt Pass
- Commercial crab, prawn, salmon fisheries

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development
- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Aquaculture:

- ✓ Finfish
- O Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
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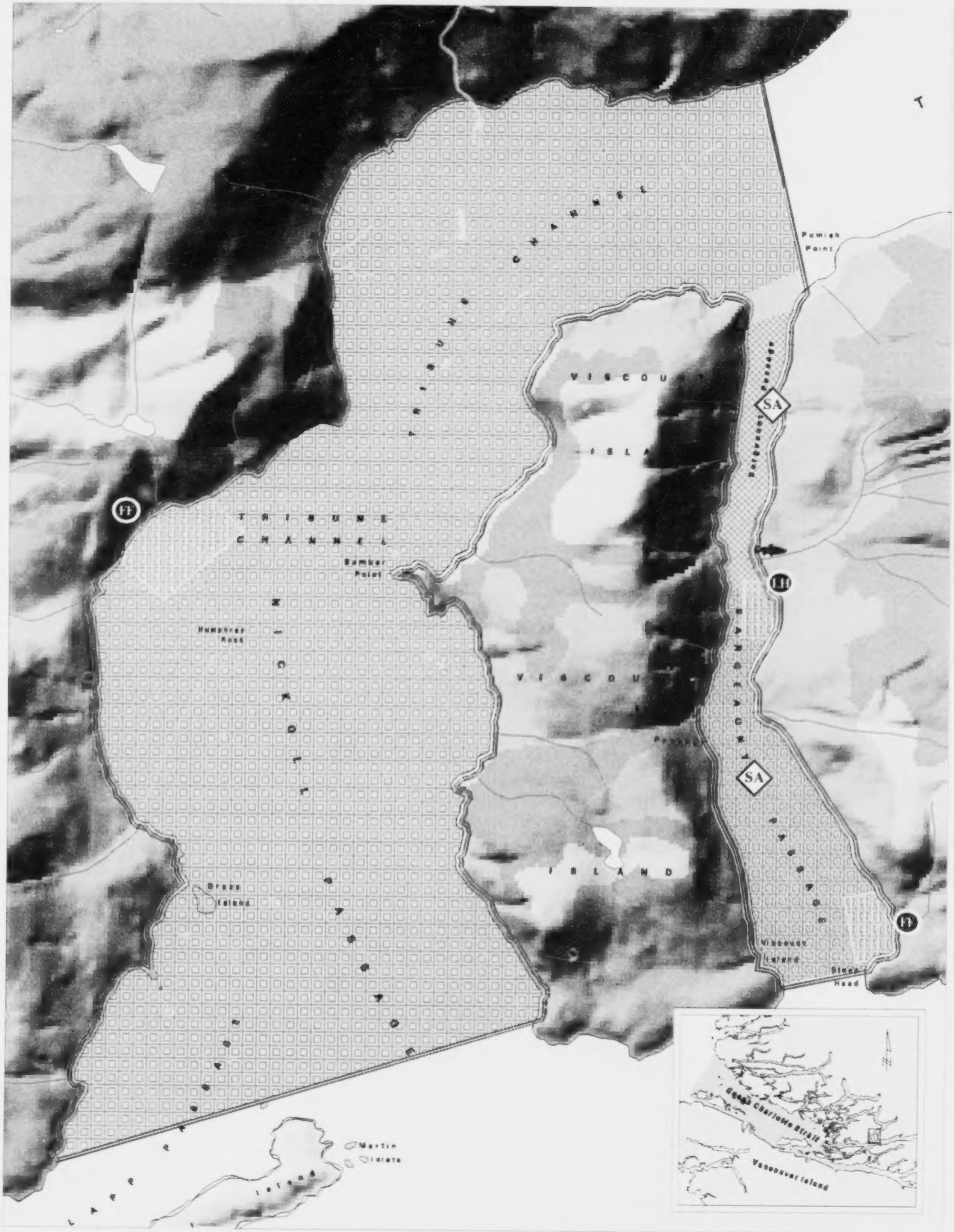
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain the existing range of opportunities and promote compatible new tenures where appropriate.
- New tenures should not impede safe anchorage at Sargeaunt Passage.
- New tenures should not alienate recorded commercial dive fishery sites.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.

20 - Tribune South (General Marine)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VISCOUNT ISLAND
Bargeaunt Passage
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Bamber Point
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NICKOLL PASSAGE
Passage
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Grass Island
Viscount Island
Steep Head
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Martin Islets
Island
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Vancouver Island

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Kilometres
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Note: Some data may not be accurate at the scale depicted

Unit 21. Tribune East

Marine Area	3510 ha	**Shoreline**	39.2 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	moderate		

Management Emphasis - General Marine

Description

The unit is a long passage with few significant biological features, limited shoreline and poor access to upland.

Unit Attributes

- Herring spawn (1 recorded: at mouth of Thompson Sound)
- Clam beds throughout inside of Kumlah Island (local knowledge)
- Orca summer resting, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Minke whale summer feeding area
- High value prawn, moderate invertebrate values
- Carter Creek and 5 other streams known to have salmon (local knowledge)
- Juvenile and adult salmon holding area, migration route
- Small estuary east of Viscount Island
- Parks/protection areas north and south of Sargeaunt Pass
- Eelgrass throughout unit (local knowledge)
- Finfish aquaculture potential throughout (OA1)
- Forest industry has identified potential log dump sites along east & west shores north of Thompson Sound, east shore south of Thompson Sound
- Kwicksutaineuk/Ah'K'waha' traditional territory
- Indian Reserve at Kumlah

Current Uses & Activities

- First Nations: Fishing and cultural areas along Gilford Island; pictographs opposite Brown Point, sensitive to disturbance.
- Marine transportation activities
- Boat anchorage inside of Kumlah Island (local knowledge)
- Commercial prawn/shrimp, crab, salmon fisheries
- Sport salmon, ground fishery, prawn, shrimp, crab fisheries
- Log handling and storage (2), heli-log sites, camp tie-ups
- Year round commercial tenure (1)

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development
- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Aquaculture:

- ✓ Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

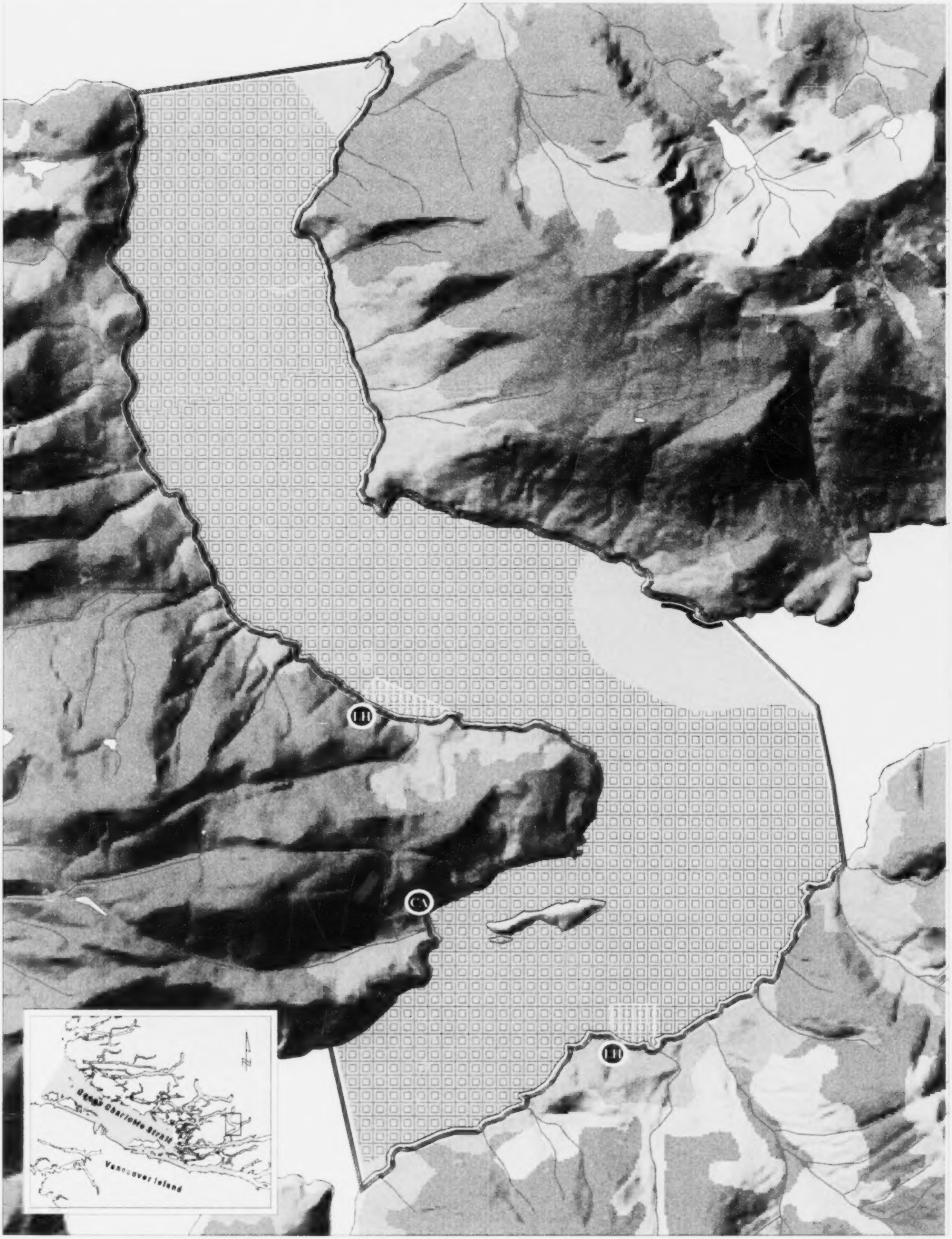
- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain general activities and accommodate new development where appropriate.
- New tenures should not alienate recorded commercial dive fishery sites.

21 - Tribune East (General Marine)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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

December 2002

Note: Some data may not be accurate at the scale depicted

Unit 22. Cullen Harbour

Marine Area	757 ha	**Shoreline**	41.8 km
Substrate	sand	**Slope**	flat
Exposure	moderate	**Depth**	low
Current	low	**Benthic Summer Temp**	warm
Roughness	moderate		

Management Emphasis - Conservation

Description

The unit includes Booker Lagoon and adjacent small islands containing rich biological features.

Unit Attributes

- CWS area of interest: unit contains habitat for migratory waterfowl and shorebirds
- Orca summer resting, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Minke summer feeding area
- Important for harbour porpoises; Dall's porpoises & Pacific white sided dolphins: Harbour Porpoise is a provincially blue-listed species
- Holding areas for juvenile and adult salmon (local knowledge)
- High marine invertebrate life values, moderate values in outer islands
- Intertidal Clams throughout(9 beaches recorded – 24 ha)
- Historical abalone area (rocks outside Cullen harbour) (local knowledge)
- Eelgrass throughout unit (local knowledge)
- Eagles and marbled murrelets utilize the area
- Kelp beds (1 identified – 4 ha)
- High cultural values; one known archaeological site
- This unit and adjacent upland were proposed as Cullen Harbour Goal 2 protection area by CCGAT in CCLRMP process; only upland now in CCLRMP terms of reference
- Moderate off bottom oyster capability at Cullen Harbour
- Good beach clam and oyster capability at Booker Lagoon
- Tsawataineuk traditional territory

Current Uses & Activities

- First Nations: cultural values; clam, prawn and crab fishery in Booker Lagoon
- Important kayak route and sheltered anchorage
- Remote campsite
- Sport ground fishery
- Commercial and recreational clam, crab and prawn harvesting in Booker Lagoon (local knowledge)
- Marine transportation route

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- X Marine Plant
- ✓ Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
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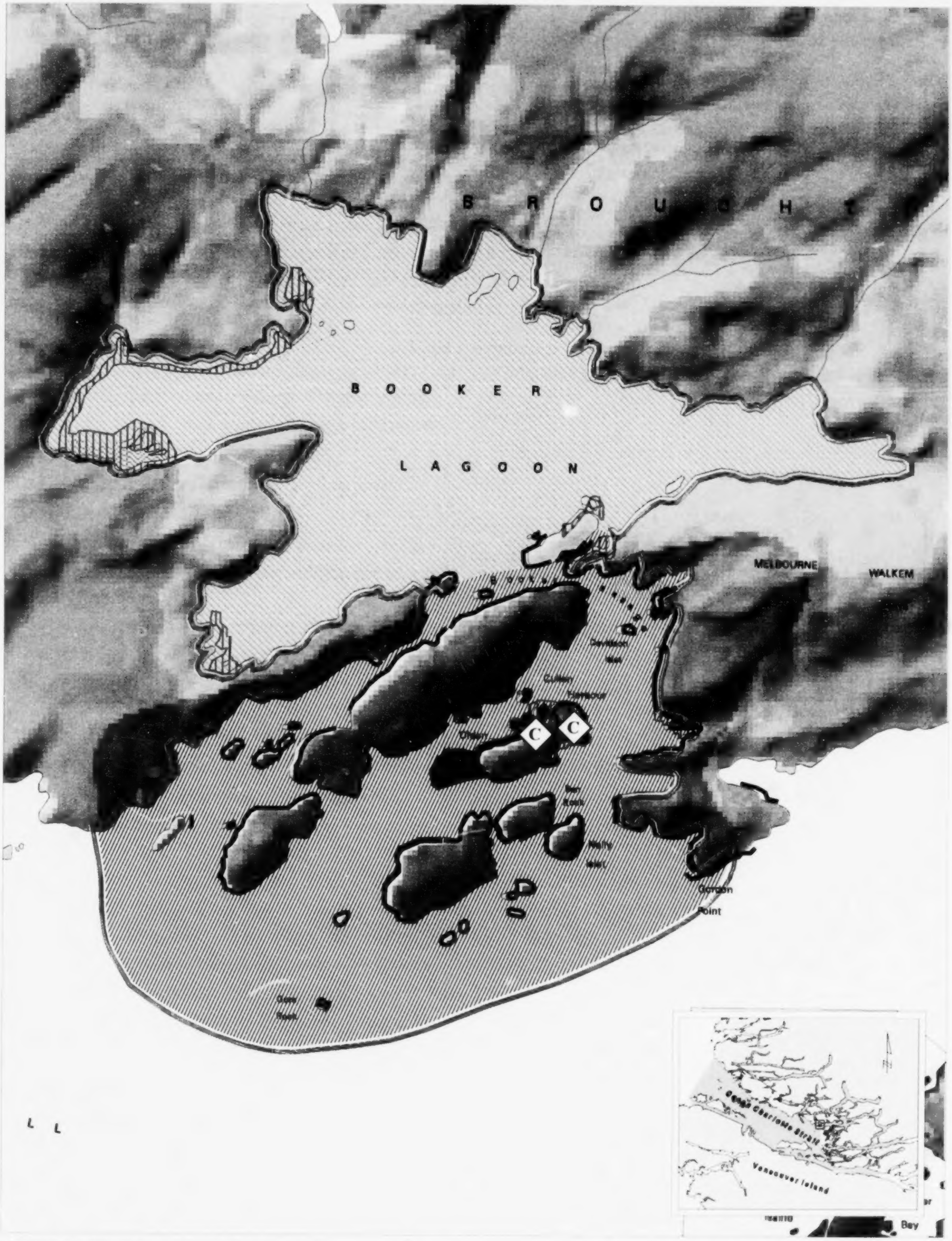
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed for conservation and compatible activities that reflect potential upland protection designation. It should be further assessed as a marine protection candidate.
- Place the Cullen Harbour component of this unit (excluding Booker Lagoon) under *Land Act* notation of interest in favour of WLAP for marine conservation and recreation purposes.
- New tenures should be compatible with any future protection area planning or designation of adjacent upland.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- Commercial and industrial use applications should be referred to CWS.

22 - Cullen Harbour (Conservation)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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

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Kilometres
December 2002

Note: Some data may not be accurate at the scale depicted

Unit 23. Fife Sound

Marine Area	4210 ha	**Shoreline**	77.4 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - Recreation

Description

This unit is important for recreation and tourism, due to important scenic and biological values, and its location adjacent to the existing Broughton Archipelago provincial park.

Unit Attributes

- CWS area of interest: most of Fife Sound and the entrance to Raleigh Passage (excluding Deep Harbour) is significant for migratory birds (Marbled Murrelets, Common Mergansers, gulls, Common Murre, Barrow's Goldeneye, Pacific Loon).
- Twin Lagoon recognized for high biodiversity
- Kelp beds (4 identified – 18 ha)
- Medium value shrimp, high value prawn
- Intertidal Clams (30 beaches – 25 ha)
- Historical abalone habitat (local knowledge)
- Juvenile and adult salmon holding area(local knowledge); migratory route along southern shore of Broughton Island
- Unrecorded salmon bearing streams (7) in area (local knowledge)
- Herring spawning (2 spawns recorded)
- Orca summer resting, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Humpback Whale resident area: provincially blue listed species
- Harbour Porpoises common throughout year: provincially blue-listed species
- Seal haulout area (local knowledge)
- Upland areas in adjacent unit were proposed as Goal 1 protection area (Broughton Extension) by CCGAT in CCLRMP process; only upland now in CCLRMP terms of reference
- Upland areas recently established as temporary OIC protection areas until June 30, 2003
- Finfish aquaculture potential: western portion of unit rated OA 1, limited in Deep Harbour
- Good off bottom scallop and oyster capability at Deep Harbour and Fly Island
- Forest industry has identified potential log dump sites along south shore of Broughton Island; complete north shore of Baker Island
- Traditional territory of Tsawataineuk and Kwicksutaineuk/Ah'K'waha'
- Adjacent Indian Reserve at Kukwapa

Current Uses & Activities

- First Nations: Shellfish harvesting area
- Safe anchorage at Deep Harbour
- Remote campsites
- Year round commercial tenure

- Salmon farms (3) including 2 slated for relocation – relocation intended for south side of Fife, Deep Harbour
- Log handling and storage (5); heli-log sites, heli-spots, camp tie-ups
- Sport salmon fishery (high value), ground fisheries; recreational crab fishery off end of Blunden Passage (local knowledge)
- Commercial salmon troll fishery; prawn fishery
- Transportation and navigation route through Fife Sound (CCG)

Acceptable Uses & Activities

Tenured Uses

X Community & Public Institutional
X Light Industrial
X Marine Telecommunications & Utilities
X Rural Development

Aquaculture:
✓ Finfish
✓ Marine Plant
X Shellfish Beach
✓ Shellfish Deep Water Aquaculture

✓ Conservation
✓ Log Handling, Storage & Infrastructure
X Private Moorage
✓ General Commercial

Commercial Recreation:
✓ Lodges and Base Camps
✓ Guiding Operations

Ongoing Non Tenured Activities

✓ Commercial Fisheries
✓ Marine Transportation

✓ First Nations
✓ Public Recreation

Code

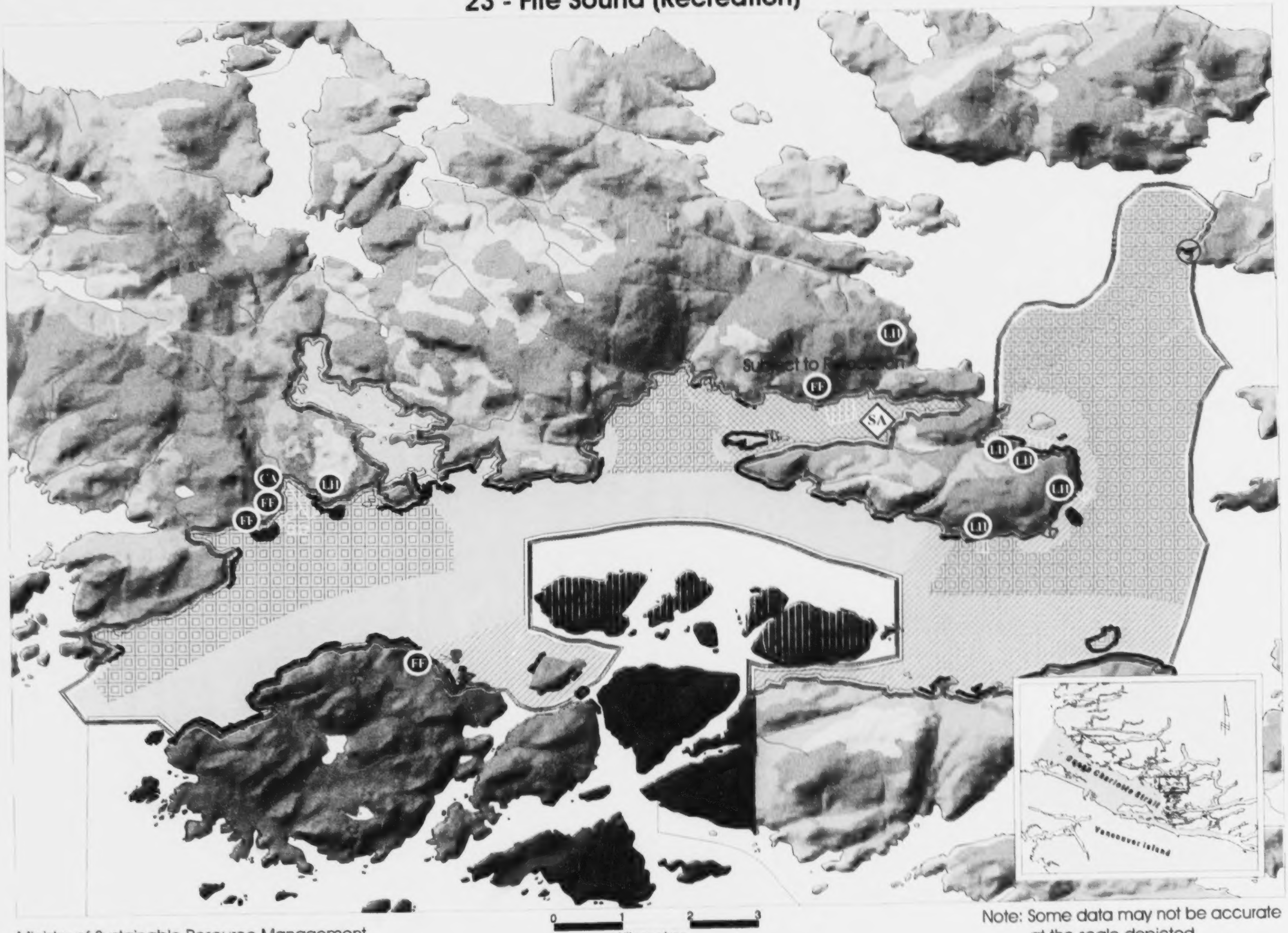
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate development opportunities where consistent with these values and where compatible with any adjacent upland protection area designation.
- Uses should be compatible with any future protection area planning or designation of adjacent upland.
- New finfish aquaculture tenures should be excluded from the southern portion of Fife Sound and Twin Lagoon.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- New tenures should not impede safe anchorage at Deep Harbour.
- The regional district should address local recreational interests in its review of tenure referrals.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- New tenures should not alienate recorded commercial dive fishery sites.

- Commercial and industrial use applications should be referred to CWS.

23 - Fife Sound (Recreation)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December 2002

Note: Some data may not be accurate at the scale depicted

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Coast and Marine Planning/Decision Support Services

Unit 24. Simoom Sound

Marine Area	765 ha	**Shoreline**	30.1 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - Recreation

Description

This area is characterized by long passageways with considerable recreational activities and commercial development. The unit experiences frequent plankton blooms which limit finfish aquaculture development.

Unit Attributes

- O'Brien Bay at the head of Simoom Sound is significant for migratory birds (Goldeneye, cormorants, diving ducks) and is a CWS area of interest. Pigeon Guillemot nesting colony in area (local knowledge)
- Kelp beds (1 identified – 2 ha)
- High value marine mammal area, including Harbour Porpoises (provincially blue-listed)
- High recreational fishing values
- Juvenile and adult salmon holding area (local knowledge)
- Salmonid Streams: 2 documented (local knowledge)
- Herring spawning (6 spawns recorded) at O'Brien Bay and McIntosh Bay
- High shrimp/prawn and crab values (local knowledge)
- Finfish aquaculture potential: OA 1 (limited)
- Good off bottom scallop and oyster capability (whole unit)
- Forest industry has identified potential log dump sites along both shores of Simoom Sound & west end of O'Brien Bay
- Tsawataineuk traditional territory
- Adjacent Indian Reserve: Kawages

Current Uses & Activities

- First Nations: No information provided
- Remote campsite
- UREP/Recreation Notation of Interest
- Safe anchorage at O'Brien Bay and East McIntosh Bay
- Salmon farms (2) with 1 slated for relocation
- Salmon sport fishery
- Commercial prawn fishery, shrimp trawl fishery

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- • Finfish
- ✓ Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
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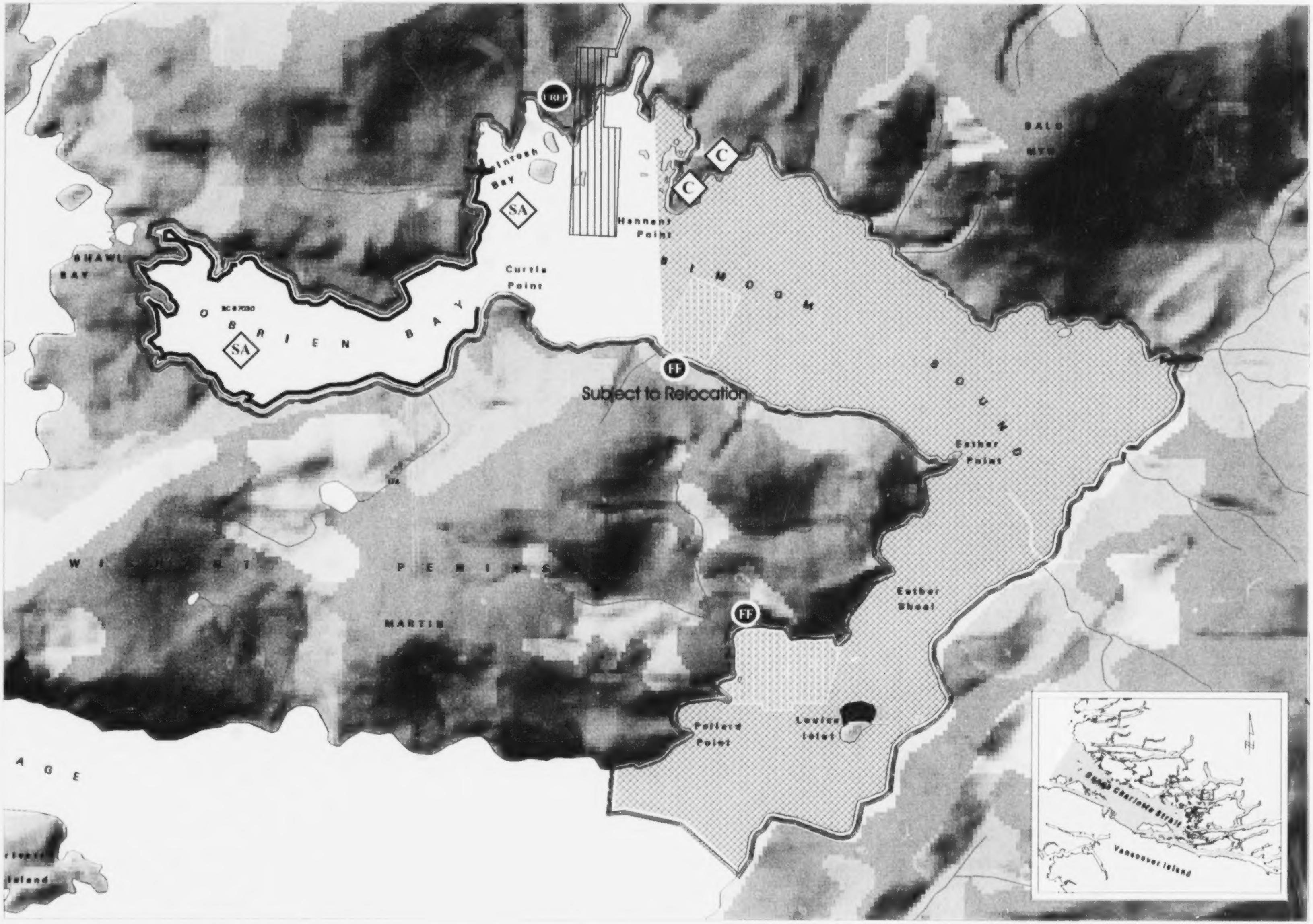
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain development opportunities and encourage further recreational use.
- Retain UREP in East McIntosh Bay.
- Marine plant and deep water aquaculture development should be limited to areas east of Hannant Point
- New tenures should minimize impact on recreation activities and uses.
- The regional district should address local recreational interests in its review of tenure referrals.
- New tenures should not impede safe anchorage at McIntosh Bay and O'Brien Bay.
- Opportunities should be maintained for beach use for commercial and public recreation.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- New tenures should not alienate recorded commercial dive fishery sites.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- Finfish aquaculture tenure modification may be approved to accommodate anchoring requirements and/ or waste management regulation requirements, which include fallow sites.
- Commercial and industrial use applications should be referred to CWS.

24 - Simoom Sound (Recreation)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Kilometres
December 2002

Note: Some data may not be accurate at the scale depicted

Unit 25. Moore Bay, Shawl Bay

Marine Area	2304 ha	**Shoreline**	61.1 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - Recreation

Description

The area is characterized by an indented rocky shoreline and low current bays.

Unit Attributes

- Shawl, Edmund, and Laura Bays, and Penphrase Passage are significant for migratory birds(Western Grebes, Common Murre, Marbled Murrelets, Goldeneyes, gulls, grebes, Common Mergansers). These are CWS areas of interest.
- Intertidal Clams (3 beaches – 8 ha)
- Eelgrass throughout area (local knowledge)
- Major adult salmon holding areas; juvenile salmon present in area
- Salmon streams south of Wishart Peninsula and at head of Sir Edmund Bay (local knowledge)
- Herring spawning (16 spawns recorded); especially Kinaird Island (local knowledge)
- Orca summer resting, winter and spring feeding areas: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Harbour Porpoise area: provincially blue-listed species (S3)
- High invertebrate values
- Humpback resident area: provincially blue listed species
- Finfish aquaculture potential: OA 1 (south portion of unit & Sir Edmund Bay)
- Good off bottom scallop and oyster capability (south of Trivett Rock)
- Forest industry has identified potential log dump sites along entire Wishart Peninsula & south shore Penphrase Passage to Sharp Passage
- Tsawataineuk traditional territory

Current Uses & Activities

- First Nations: Some fishing and shellfish harvest areas. Extensive cultural areas throughout; pictographs on bluff in Sir Edmund Bay
- Year round commercial tenures (4)
- Seasonal commercial tenure
- Marina at Shawl Bay
- UREP/Recreation Reserve: MOF Recreation Site
- Remote campsites
- Boat havens at Laura Bay (under *Land Act* notation of interest)
- Log handling & storage (3) upland logging camp, heli-log sites
- Salmon farm
- Sport salmon fishery; crab harvesting in Moore Bay, Shawl Bay
- Commercial prawn fishery

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- ✓ Marine Telecommunications & Utilities
- ✓ Rural Development

Aquaculture:

- ✓ Finfish
- ✓ Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- ✓ General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
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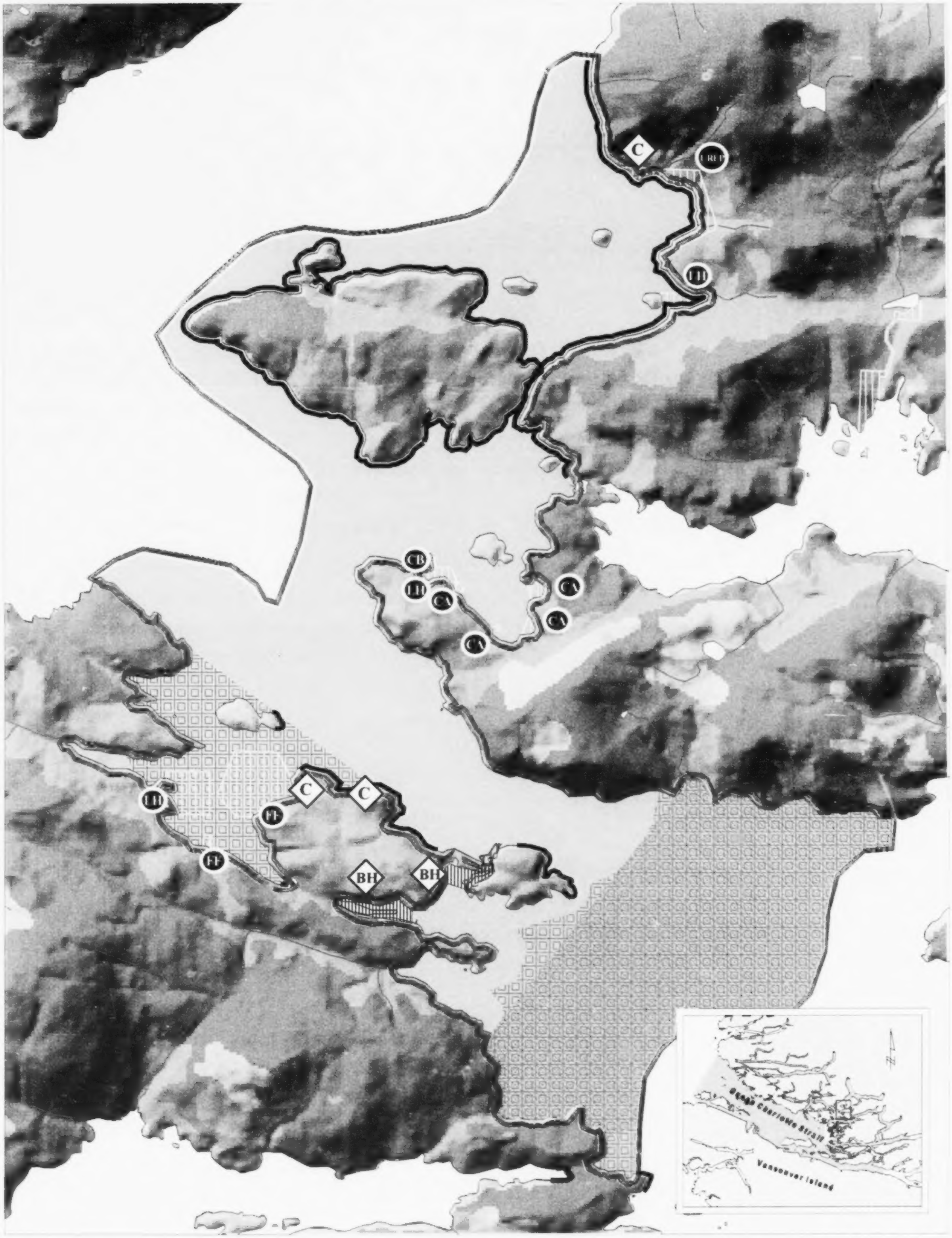
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- The unit should be managed to maintain existing activities and uses, with a focus on recreation in the northern portion of the unit.
- New finfish aquaculture applications should be limited to southern portion of Penphrase Passage, south of Trivett Rock.
- Maintain *Land Act* notation of interest over Laura Bay boat havens.
- New tenures should minimize interference with existing tourism facility at Shawl Bay.
- General development should be focused at Sir Edmund Bay and commercial recreation development at Shawl Bay.
- Marinas and log dumps/heli dumps should be compatible with recreational boating.
- New tenures should not alienate recorded commercial dive fishery sites.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- The regional district should address local recreational interests in its review of tenure referrals.
- Commercial and industrial use applications should be referred to CWS.

25 - Moore Bay Shawl Bay (Recreation)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Kilometres
December 2002

Note: Some data may not be accurate
at the scale depicted

Unit 26. Belle Isle Sound

Marine Area	514 ha	**Shoreline**	19.8 km
Substrate	mud	**Slope**	Sloping
Exposure	low	**Depth**	Deep
Current	low	**Benthic Summer Temp**	Cold
Roughness	Low		

Management Emphasis – General Marine

Description

The area is characterized by a low exposure, low current sound with few biological attributes.

Unit Attributes

- Herring spawning at entrance to Sound (1 spawn recorded)
- Juvenile and adult salmon holding area (local knowledge)
- Salmon streams by Indian Reserve, at head of unit and half way along Sound (local knowledge)
- High prawn value
- Finfish aquaculture potential: OA 2
- Forest industry has identified potential log dump sites along north & south shores at head of Sound
- Tsawataineuk traditional territory
- Adjacent Indian Reserve (1) – Bat-L-Ki

Current Uses & Activities

- First Nations: Extensive fishing areas throughout
- Log storage site (1), Heli-log sites, camp tie-up
- Safe anchorage (1) – Belle Isle
- Sport salmon fishery
- Commercial prawn fishery

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

  - X Finfish
  - X Marine Plant
  - X Shellfish Beach
  - X Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Commercial Recreation:

  - ✓ Lodges and Base Camps
  - ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
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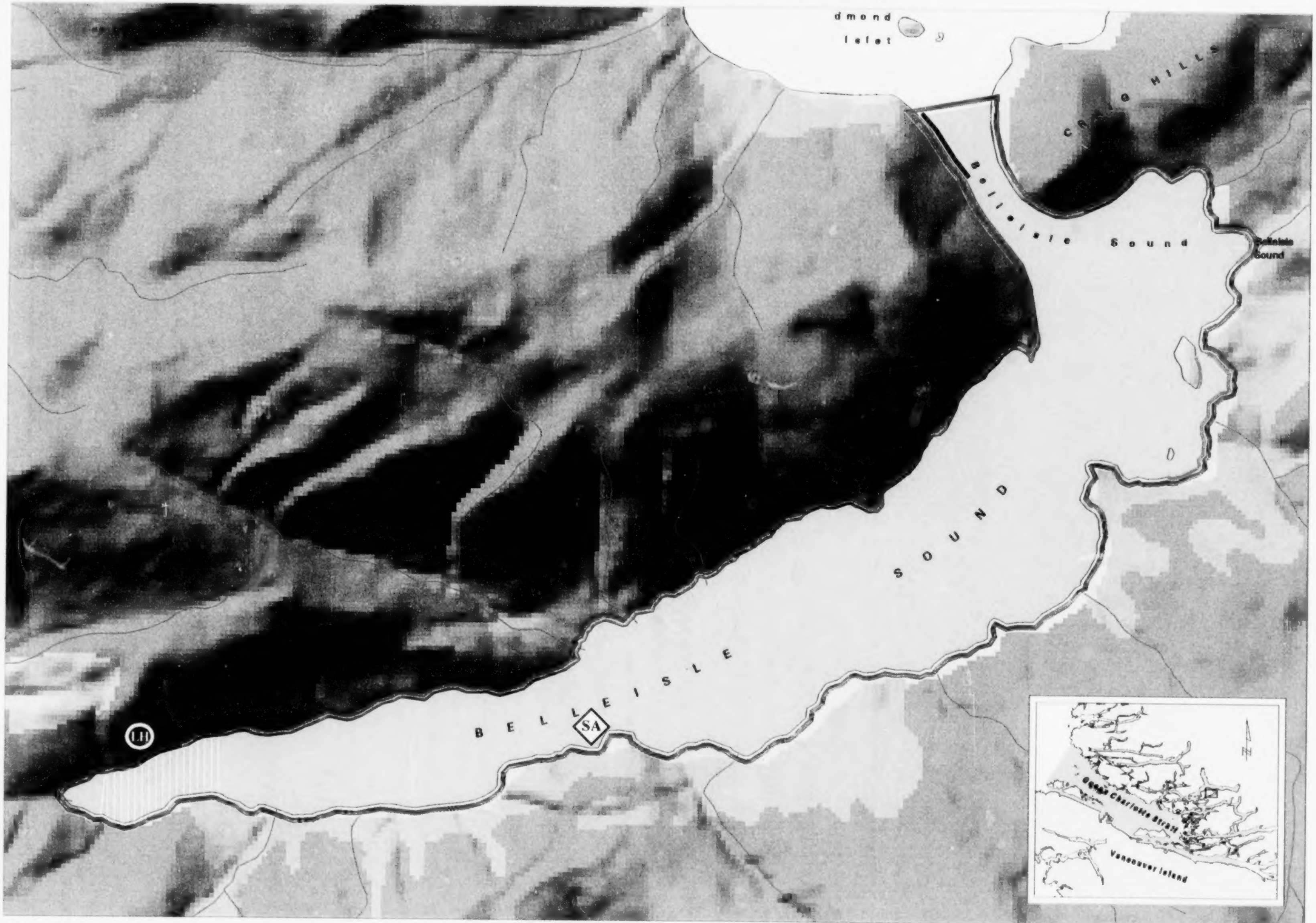
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate existing uses.
- New tenures should not impede safe anchorage at Belle Isle Sound
- New tenures should not alienate recorded commercial dive fishery sites.
- Log tow operators are encouraged to avoid prawn trap fishery areas.

26 - Belleisle Sound (General Marine)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Kilometres
December 2002

Note: Some data may not be accurate at the scale depicted

Unit 27. Wakeman Sound

Marine Area	2648 ha	**Shoreline**	30.6 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	deep
Current	low	**Benthic Summer Temp**	cold
Roughness	low		

Management Emphasis – General Marine

Description

The area is characterized by a deep inlet leading up to, but excluding the Wakeman River Estuary.

Unit Attributes

- This unit is significant for migratory waterfowl associated with the estuary (Western Grebes, swans, Brant, mallard, Goldeneye, Bufflehead, marbled Murrelets, dabbling ducks; Canada Geese) and is a CWS area of interest
- Moderate importance for Harbour Porpoises (blue-listed species)
- Very high herring spawn habitat index (25 spawns recorded)
- Major salmon migratory routes and holding area associated with estuary
- Salmonid Streams; 6 assumed (4 confirmed, according to local knowledge)
- Orca spring feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Humpback Whale resident area: provincially blue listed species
- Estuary and adjacent upland areas were proposed as Goal 2 protection area (Wakeman Estuary) by CCGAT in CCLRMP process; estuary being addressed in CCLRMP
- Forest industry has identified potential log dump sites along entire eastern shore & southern half of western shore
- Traditional territory of Tsawataineuk First Nation
- Adjacent Indian Reserves at Dug-Da-Myse and Kyldagwis

Current Uses & Activities

- First Nations: Extensive fishing areas throughout
- Log handling and storage (11); heli-log sites, camp tie-ups
- Safe anchorage at Wakeman Sound
- Sport salmon fishery
- Commercial crab, prawn fishery

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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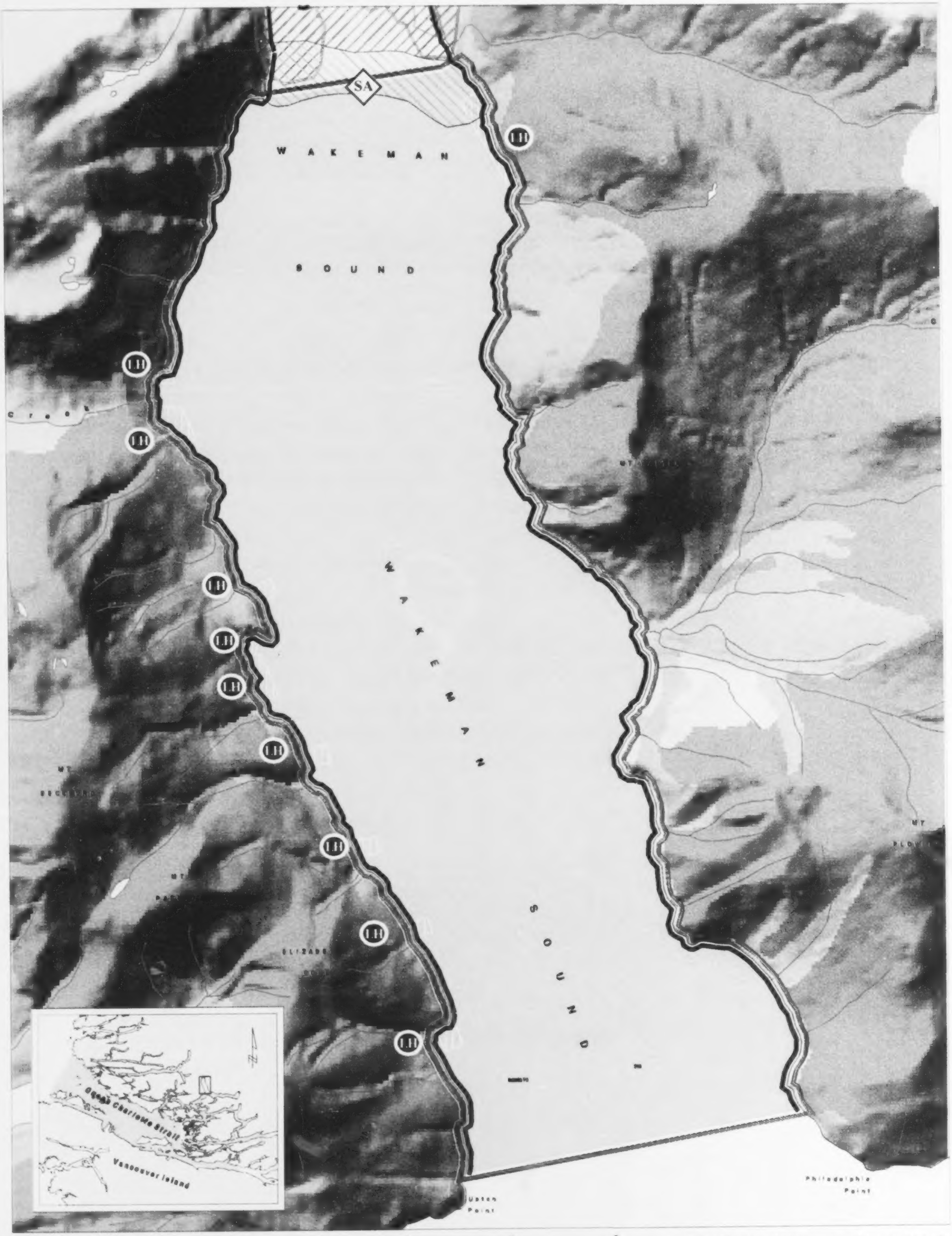
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to recognize existing tenured activities while minimizing impact on estuarine values and salmon migration and holding areas.
- New tenures should not impede safe anchorage at Wakeman Sound.
- All applications for use within 1km of Wakeman Estuary should be referred to CWS.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

27 - Wakeman Sound (General Marine)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Ministry of Sustainable Resource Management
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December 2002

Note: Some data may not be accurate at the scale depicted

Unit 28. Kingcome Estuary

Marine Area	1060 ha	**Shoreline**	53.3 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	cold
Roughness	low		

Management Emphasis - Conservation

Description

The area is characterized by a steep walled inlet with considerable freshwater outflow and sporadic development activities leading to but excluding the Kingcome River estuary.

Unit Attributes

- This unit is significant for migratory waterfowl (Western Grebes, Common Mergansers, gulls, Canada Geese, Goldeneye, diving ducks) and is a CWS area of interest
- Salmonid Streams: 6 observed, 7 assumed
- Herring spawning (14 spawns recorded); major holding areas, migration routes
- Orca spring feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Harbour Porpoise area: provincially blue-listed species
- Moderate prawn value
- Significant eulachon values, eulachon holding area
- Non-native cultural feature (1)
- Cultural heritage values in estuary
- Estuary and adjacent upland areas were proposed as Goal 2 protection area (Kingcome Estuary) by CCGAT in CCLRMP process; estuary being addressed in CCLRMP
- Finfish aquaculture potential: OA 2 (very limited)
- Forest industry has identified potential log dump sites along the north shore
- Tsawataineuk traditional territory
- Adjacent Indian Reserve at Gwa-Yee
- Private upland parcels at head of estuary

Current Uses & Activities

- First Nations: Extensive fishing areas throughout
- Remote campsite
- Secondary boating route
- Public wharf (1)
- Other tenures (1)
- Log handling and storage (7); upland logging camp, storage tanks
- Commercial wharf (1)
- Heavy industrial (1)
- Commercial prawn and crab fisheries

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- • Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development
- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- • General Commercial

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

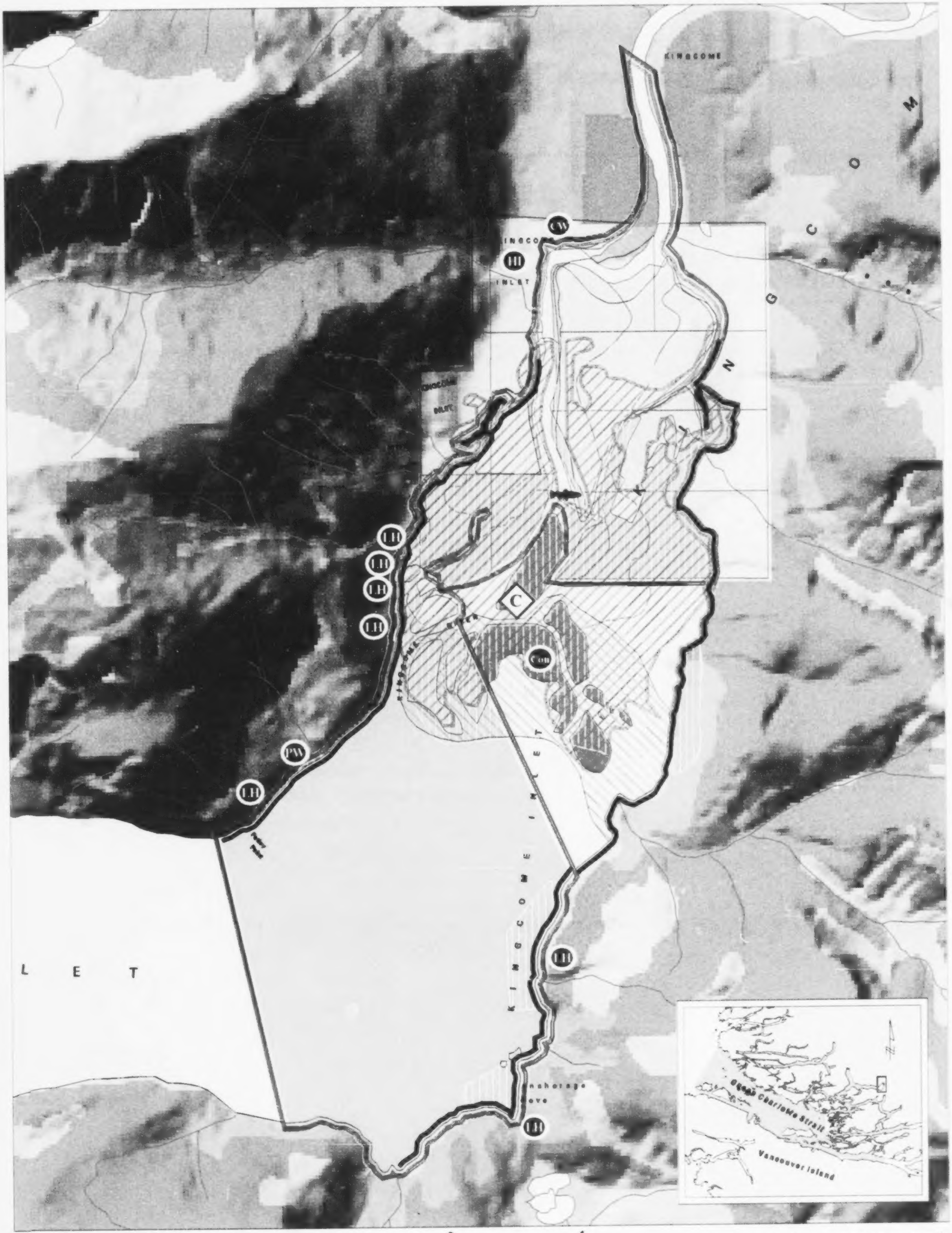
- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain development at levels that do not adversely impact the adjacent estuarine values.
- New tenures should be compatible with any future protection area planning or designation of estuary.
- New tenures should be designed and located to avoid impact on eulachon habitat and migration routes.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- All applications for use within the unit should be referred to CWS.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

28 - Kingcome Estuary (Conservation)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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

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Kilometres
December 2002

Note: Some data may not be accurate
at the scale depicted

Unit 29. Kingcome Inlet

Marine Area	8128 ha	**Shoreline**	67.4 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	deep (200-1000m) to mid-depth
Current	low	**Benthic Summer Temp**	warm to cold
Roughness	low		

Management Emphasis – General Marine

Description

The area is characterized by a long, deep fjord inlet. It has extensive herring spawn on its north side. Uses may be limited by outflow winds and freshwater influence of Kingcome and Wakeman Rivers.

Unit Attributes

- The southeast portion of this unit is significant for migratory waterfowl (Western Grebes, Common Mergansers, gulls, Canada Geese, Goldeneye, diving ducks) and is a CWS area of interest.
- Salmonid Streams: 6 observed, 3 assumed
- Major juvenile and adult salmon migration route (local knowledge); adult holding area
- Herring spawning (45 spawns recorded)
- High prawn value
- Orca summer resting, spring and winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Humpback Whale resident area: provincially blue listed species
- Harbour Porpoises in area: provincially blue-listed species
- Seal haulout area at entrance to Belle Isle Sound (local knowledge)
- Finfish aquaculture potential: OA 2 (south shore of inlet)
- Eulachon migration route and holding area – at eastern extent
- Moderate off bottom oyster capability west of Wakeman Inlet
- Forest industry has identified potential log dump sites along north shore of Kingcome east of Sutlej, north shore east of Wakeman, south shore Moore Bay to Belle Isle Sound
- Tsawataineuk traditional territory
- Adjacent Indian Reserve (1) – Charles Creek

Current Uses & Activities

- First Nations: Extensive fishing areas throughout. Culturally significant areas along entrance and Charles Creek area; high use for shellfish and prawn harvesting
- Safe anchorage (1) – Magin Islets Cove
- Commercial prawn and crab fisheries
- Sport salmon fishery
- Log handling and storage (11); upland logging camp, oil tank, heli-log sites, camp tie-ups

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- ✓ Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development
- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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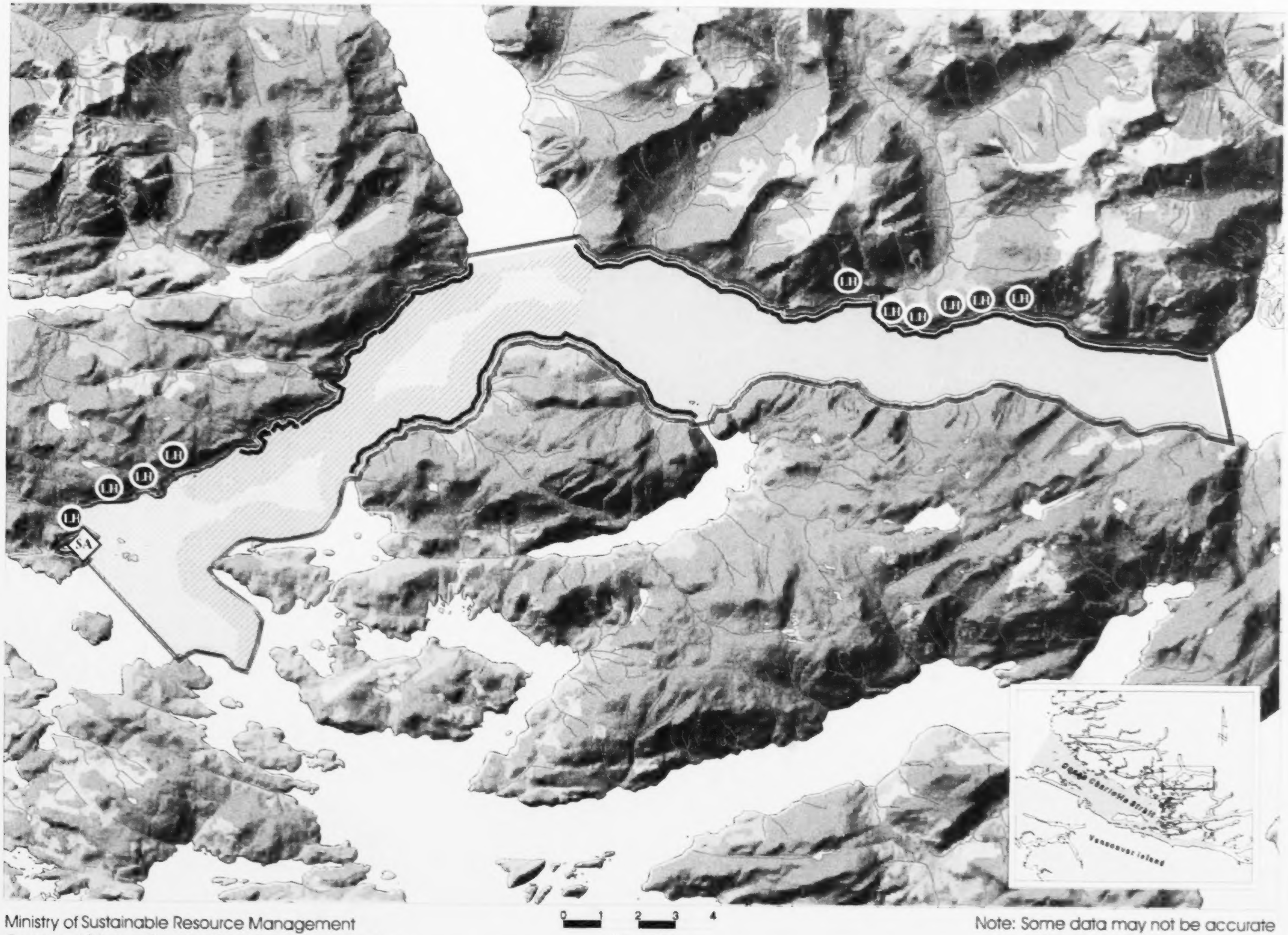
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate a variety of uses and activities while minimizing impact on herring, eulachon and salmon spawning and migration.
- New tenures should not impede safe anchorage at Magin Islets Cove.
- Log tow operators are encouraged to avoid prawn trap fishery areas.
- Tenure holders should work with the Tsawataineuk First Nation to coordinate log handling activities during eulachon and salmon runs.
- Shellfish deepwater aquaculture proponents are encouraged to develop agreements which provide for direct involvement of the Tsawataineuk First Nation in operations.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- Commercial and industrial use applications within the unit should be referred to CWS.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

29 - Kingcome Inlet (General Marine)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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

December 2002

Note: Some data may not be accurate at the scale depicted

Unit 30. Cypress Harbour

Marine Area	1676 ha	**Shoreline**	29.7 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	deep (200-1000m) to mid-depth
Current	low	**Benthic Summer Temp**	warm to cold
Roughness	low		

Management Emphasis – General Marine

Description

The unit includes part of Sutlej Channel, an area is characterized by low current, and sheltered, deep water. The unit has several log handling sites. Cypress Harbour is a popular destination for boaters and kayakers.

Unit Attributes

- Salmon migration route and adult holding area
- Salmon stream in Duck Inlet (local knowledge)
- High prawn value
- Moderate to high invertebrate fishery
- Eelgrass around Cecil Island (local knowledge)
- Springs, pink, sockeye, chum salmon in Sutlej Channel (local knowledge)
- Orca summer resting, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Humpback Whale resident area: provincially blue listed species
- Harbour Porpoise area: provincially blue-listed species
- Grey Whale sightings in Sutlej Channel (local knowledge)
- Finfish aquaculture potential: OA 1 (majority); OA 2 (eastern end)
- Good off bottom clam/oyster and scallop shellfish aquaculture capability (Sutlej Channel)
- Traditional territories of Tsawataineuk and Gwawaenuk
- Forest industry has identified potential log dump sites along both shores.

Current Uses & Activities

- First Nations: Salmon & dogfish fishing areas. Productive clam beds, in Stopford Bay, Philip Point to Bover Point. Cultural areas throughout. Concerned about impact of existing salmon farm on shellfish beds, salmon migration.
- Salmon farm at Cypress Harbour, slated for relocation
- Log handling and storage (2); heli-log sites, camp tie-up
- UREP/Recreation reserves (2): MOF Recreation site
- Safe anchorage at Cypress Harbour
- Remote campsites
- Sport & aboriginal fishery for shrimp, prawn and crab fisheries (especially Wood Point to Walker Point, Donald Head)
- Commercial shrimp, prawn and crab fisheries

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- • Finfish
- ✓ Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
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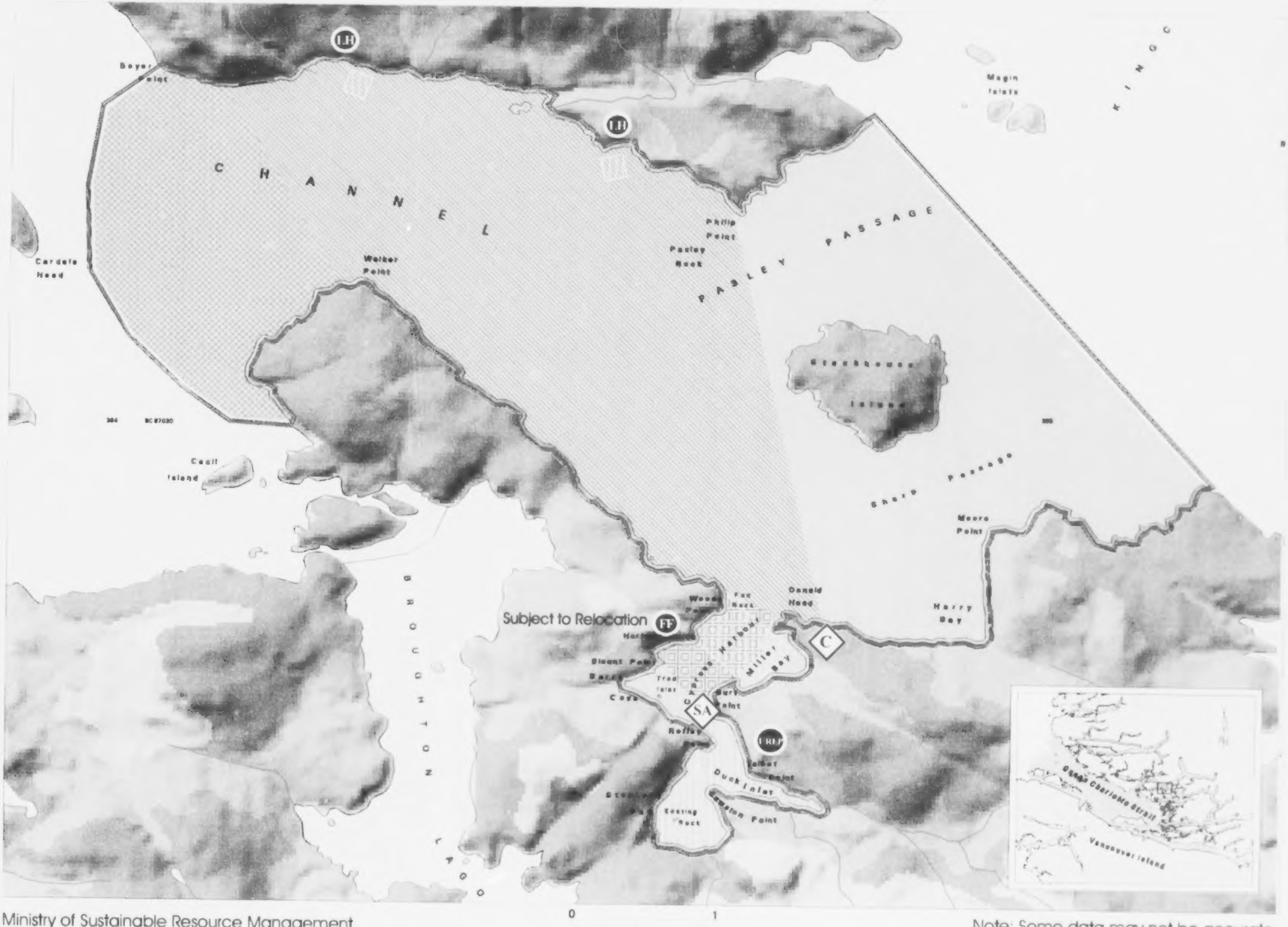
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate existing commercial uses.
- Tenure applicants are encouraged to develop working relationships with the Gwawaenuk and Tsawataineuk First Nations.
- New tenures should not impede safe anchorage at Cypress Harbour.
- New tenures should not alienate recorded commercial dive fishery sites.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- Log tow operators are encouraged to avoid prawn trap fishery areas.
- Finfish aquaculture tenure modification may be approved to accommodate anchoring requirements and/ or waste management regulation requirements, which include fallow sites.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

30 - Cypress Harbour (General Marine)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Moore Point
Harry Bay
Cecil Island
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Fox Rock
Donald Head
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Miller Bay
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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

December 2002

Note: Some data may not be accurate at the scale depicted

Unit 31. Greenway Sound / Sutlej

Marine Area	3031 ha	**Shoreline**	82.0 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - Recreation

Description

This unit is characterized by sheltered passages with low current. The unit contains is popular for boating and kayaking, and contains the Greenway Sound Marina.

Unit Attributes

- Greenway Sound is significant for migratory waterfowl (diving ducks, scoters, Barrow's Goldeneye) and is a CWS area of interest
- Kelp beds (1 identified – 4 ha)
- Intertidal Clams (1 beach – <1 ha)
- Juvenile salmon migration route and holding area (local knowledge)
- Salmonid Streams: 2 observed, 2 assumed; three major spawning streams in Greenway Sound (local knowledge)
- Coho spawning areas south of Maude Islet; dog, Pink, Coho spawning areas near Cecil Island (local knowledge)
- Herring spawning (3 spawns recorded); herring spawn all the way to Carter Pass (local knowledge)
- High Prawn value
- High invertebrate values
- Orca summer resting, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Humpback Whale resident area: provincially blue listed species
- Harbour Porpoise area: provincially blue-listed species
- Parks/Protection Area – Cecil Island
- Forest industry has identified potential log dumps on the south shore of Greenway Sound, and the north shore of Sutlej Channel
- Finfish aquaculture potential: OA 1 scattered
- Good off bottom scallop and oyster capability throughout entire unit
- Traditional territory of Tsawataineuk and Gwawaenuk First Nations

Current Uses & Activities

- First Nations: Extensive fishing areas, including major prawn fishery areas. Significant clam beds in Greenway Sound. Concerned about effect of salmon farms on shellfish beds and salmon spawn and migration in unit, as well as recreational activities.
- Salmon farms (2)
- Log handling and storage (4), camp tie-ups; heli-log sites
- Marina at Greenway Sound (Greenway Lodge)
- UREP/Recreation reserve on hiking trails adjacent Greenway Sound
- Remote campsite

- Sport prawn, shrimp and crab fisheries
- Commercial prawn, shrimp and crab fisheries

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- • Finfish
- ✓ Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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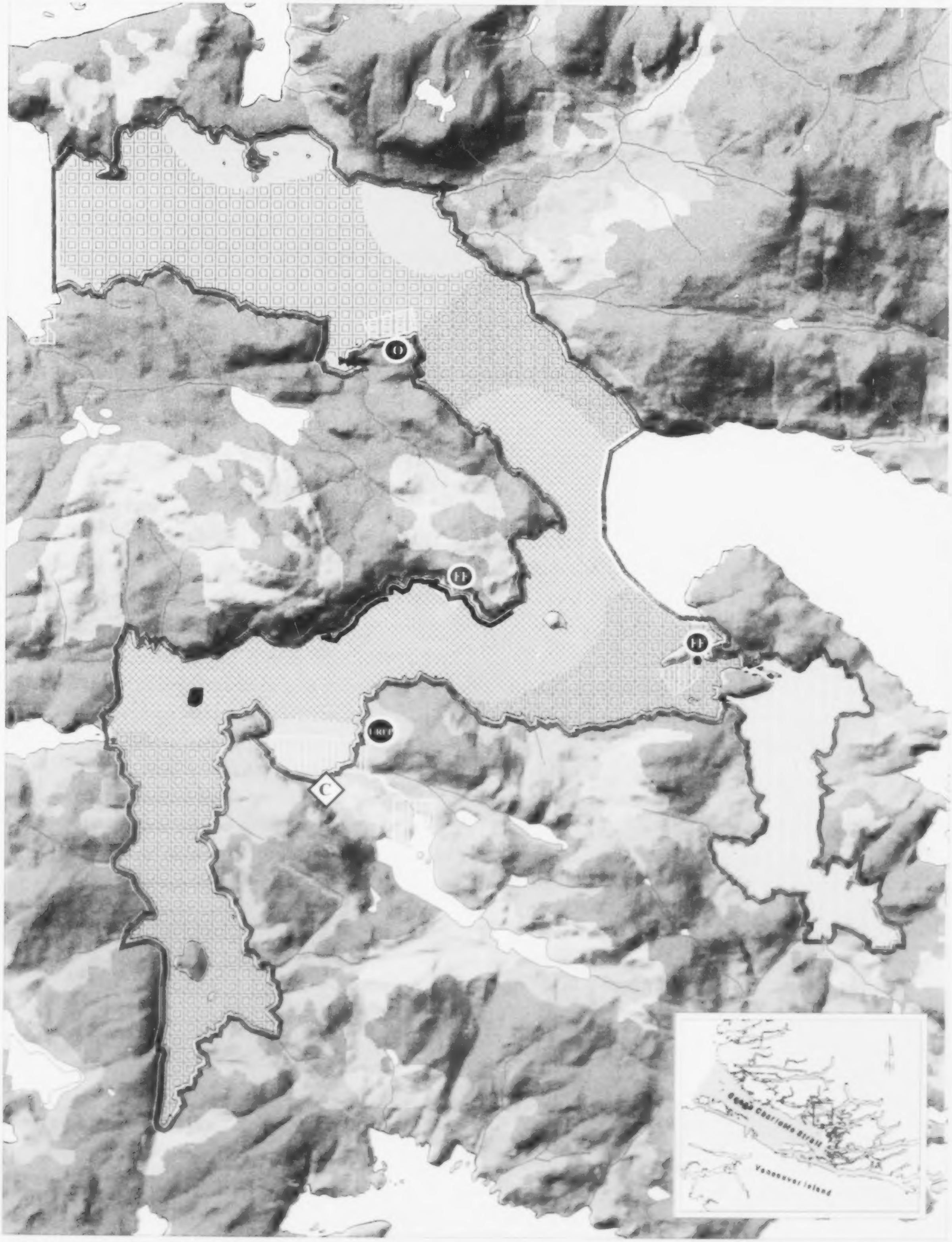
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate tourism and recreation, and compatible uses.
- Tenure applicants are encouraged to develop working relationships with the Gwawaenuk and Tsawataineuk First Nations, especially for commercial recreation.
- New tenures should be sited and managed to minimize conflict with existing facility at Greenway Sound.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- New tenures should not alienate recorded commercial dive fishery sites.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- Log tow operators are encouraged to avoid prawn trap fishery areas.
- The regional district should address local recreational interests in its review of tenure referrals.
- Finfish aquaculture tenure modification may be approved to accommodate anchoring requirements and/ or waste management regulation requirements, which include fallow sites.
- Commercial and industrial use applications within the unit should be referred to CWS.

31 - Greenway Sound Sutlej (Recreation)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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

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December 2002

Note: Some data may not be accurate
at the scale depicted

Unit 32. Wells Passage

Marine Area	2551 ha	**Shoreline**	70.4 km
Substrate	mud	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - General Marine

Description

This unit is a wide, well-flushed passage with a variety of developments and transportation activities. Seasonal float homes in Sullivan Bay are approaching year-round community status. The area contains many important First Nations clam beds.

Unit Attributes

- The entrance to Drury Inlet is significant for migratory birds (Marbled Murrelets, Common Mergansers, Scoters, scaup, cormorants, loons, grebes, Rhinoceros Auklets, gulls), and is a CWS area of interest.
- Kelp beds (14 identified – 204 ha total area)
- Eelgrass in area (local knowledge)
- Intertidal Clams (13 beaches – 22 ha)
- Adult salmon holding area, migration route, Coho spawning at Providence Point (local knowledge)
- Salmonid Streams: 9 observed, 2 assumed, including one in Carter Pass (local knowledge)
- Moderate invertebrate values at Carter Pass
- High prawn value (local knowledge)
- Herring spawning (4 spawns recorded)
- Sea lion colony at Surgeon Islets, west of Atkinson Island (local knowledge)
- Orca summer resting, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Harbour Porpoise area: provincially blue-listed species
- Dolphin pods congregate at Sullivan Bay during winter (local knowledge)
- Finfish aquaculture potential: OA 1
- Good to moderate off bottom scallop and oyster capability from Sullivan Bay to Dunsany Passage
- Traditional territory of Tsawataineuk and Gwawaenuk First Nations

Current Uses & Activities

- First Nations: Extensive fishing and cultural areas throughout passage; extensive shellfish harvest areas, including areas along southwest & southeast shorelines. Concerned about impact of existing salmon farms on shellfish beds, salmon runs.
- Salmon farms (2)
- Log handling and storage (5); upland logging camp
- Light industrial-oil tanks (1)
- Marina at Sullivan Bay
- Private wharf (1)
- Year round commercial tenures (2)
- Submerged pipeline transects Napier Bay

- Boat Haven at Tracey Harbour (under *Land Act* Notation of Interest).
- Marine transportation route through Wells Pass (CCG)
- Sport salmon fishery
- Commercial prawn fishery

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- ✓ Light Industrial
- ✓ Marine Telecommunications & Utilities
- ✓ Rural Development

Aquaculture:

- ✓ Finfish
- ✓ Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- ✓ General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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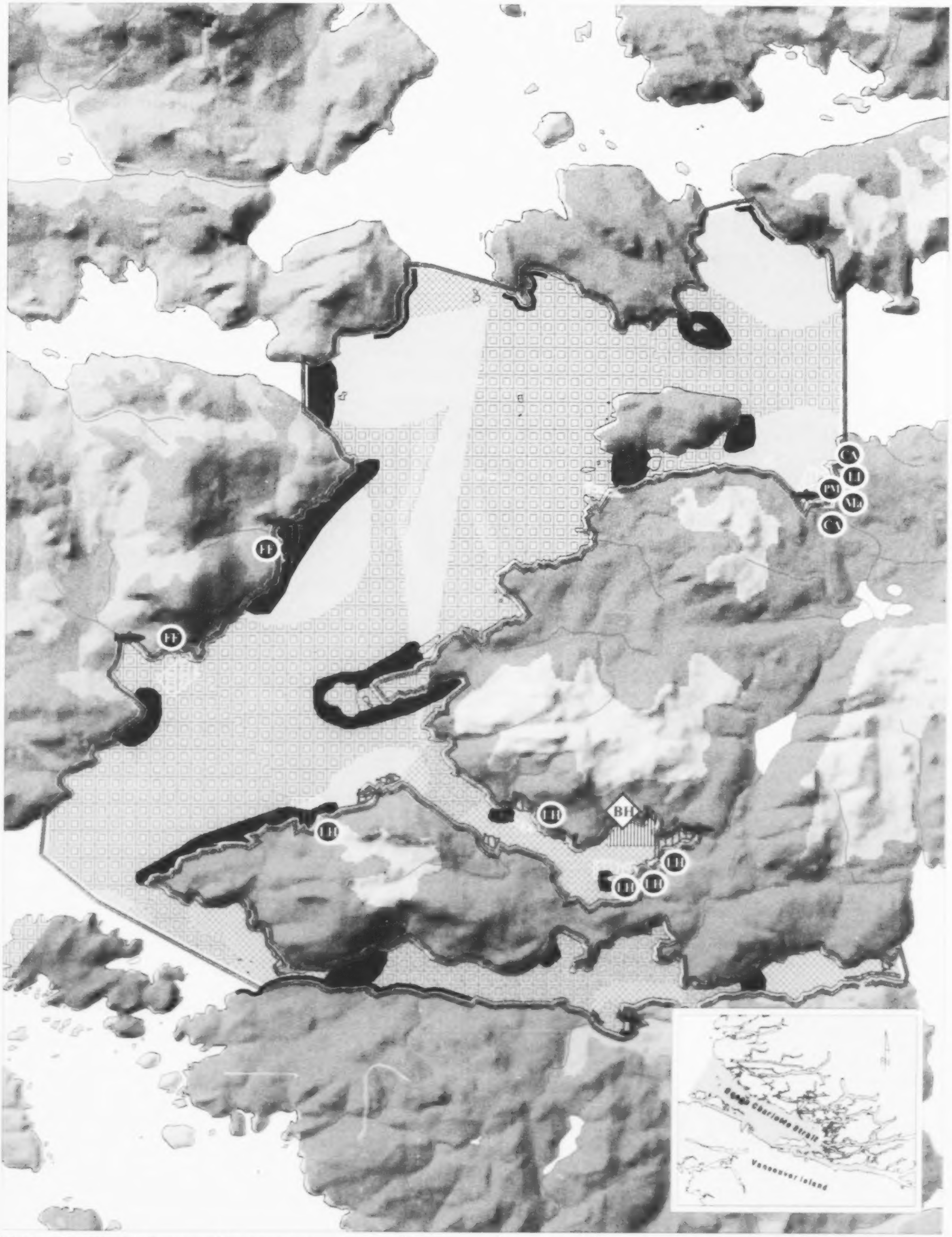
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate development while maintaining marine transportation routes.
- Tenure applicants are encouraged to develop working relationships with Gwawaenuk and Tsawataineuk First Nations.
- New tenures should be located and managed to avoid conflict with existing development.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Maintain *Land Act* notation of interest over Tracey Harbour boat haven.
- Shellfish and finfish aquaculture should not be located in Tracey Harbour or Napier Bay due to possible conflict with existing uses, including First Nations uses.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- Commercial and industrial use applications within 1km of the entrance to Drury Inlet should be referred to CWS.

32 - Wells Passage (General Marine)



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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

December 2002

Note: Some data may not be accurate
at the scale depicted

Unit 33. Nepah Lagoon

Marine Area	613 ha	**Shoreline**	21.7 km
Substrate	mud	**Slope**	flat
Exposure	low	**Depth**	photic
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis – General Marine

Description

This unit is a narrow, steep-walled inlet with almost beach. Access and uses are limited by Roaringhole Rapids at the lagoon entrance, and freshwater influence at head of Lagoon.

Unit Attributes

- Herring spawning (1 spawn recorded) in small bay northeast of Rapids; northwest of Yuki Bay (local knowledge)
- Sea cucumbers at head of Nepah Lagoon (local knowledge)
- Spring salmon spawning in upper Nepah lagoon (local knowledge)
- High concentrations of eelgrass (local knowledge)
- Finfish aquaculture potential: OA 1 in Lagoon
- Moderate off bottom scallop and oyster capability throughout
- Forest industry has identified potential log dump sites on the west side of Nepah Lagoon.
- Gwawaenuk traditional territory

Current Uses & Activities

- First Nations: essential herring fishing area by Gwawaenuk; prawn, shrimp and clam fishery areas. Concerned about further development impacts on the herring fishery, due to decline in herring spawn in adjacent units.
- Log handling and storage (3); heli-log site, camp tie-up

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development
- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Aquaculture:

- X Finfish
- ✓ Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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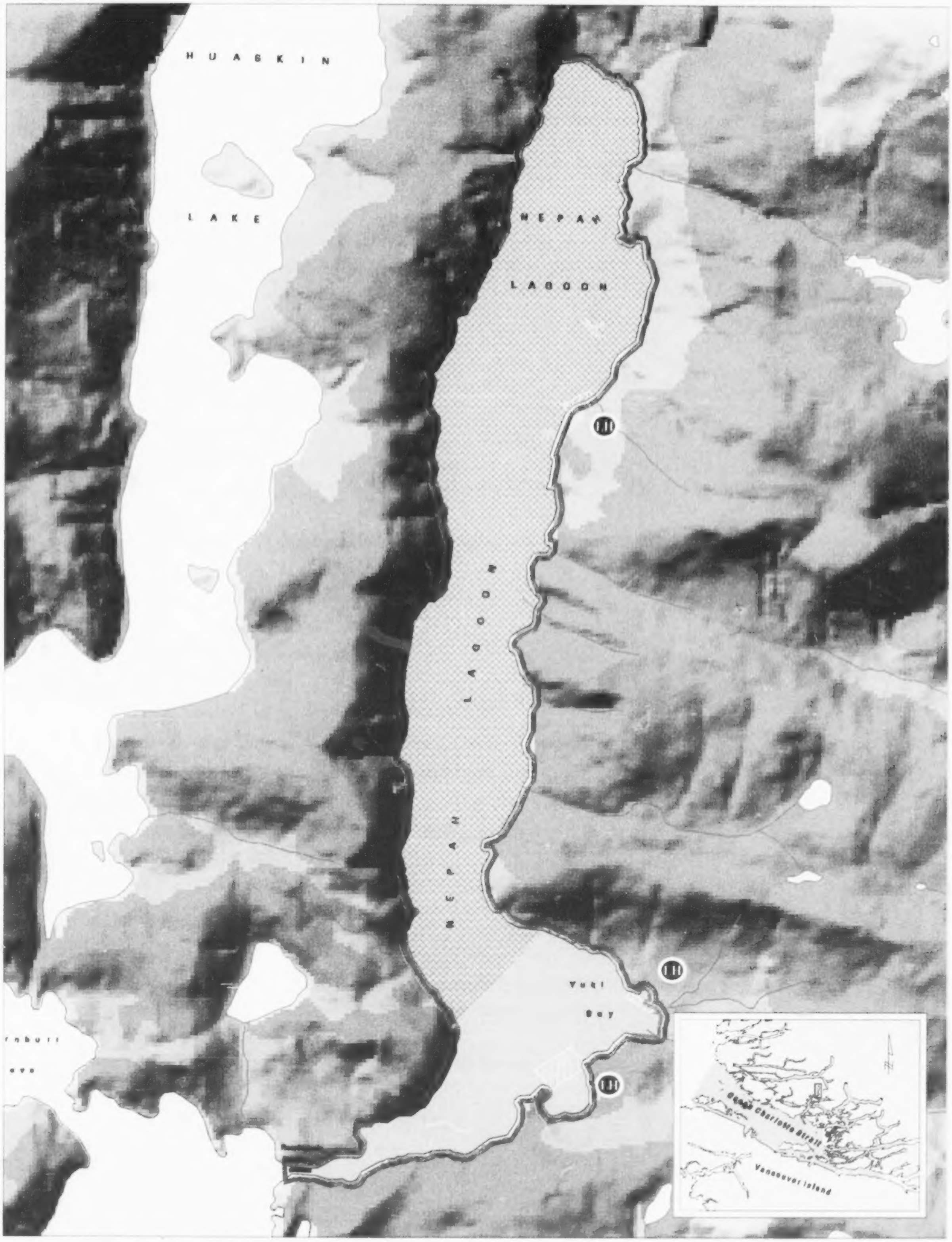
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate existing log handling and compatible uses.
- Tenure applicants are encouraged to develop working relationships with Gwawaenuk First Nation.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.

33 - Nepah Lagoon (General Marine)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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

December 2002

Note: Some data may not be accurate at the scale depicted

Unit 34. MacKenzie Sound

Marine Area	860 ha	**Shoreline**	37.6 km
Substrate	mud	**Slope**	flat
Exposure	low	**Depth**	photic
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis – General Marine

Description

MacKenzie Sound is a remote inlet with low current, low exposure and shallow warm waters. It is a significant area for salmon conservation and First Nations use. Nimmo Bay resort lodge is in unit.

Issues and Concerns

Unit Attributes

- This unit is significant for migratory birds (Scoters, Goldeneyes, gulls, grebes, Common Mergansers), and is a CWS area of interest.
- Intertidal Clams (2 beaches – 13 ha)
- Important salmon nursery and holding areas; Coho fry in stream opposite Nimmo Bay entrance (local knowledge)
- Salmon migration route for Mackenzie River Sockeye and Nimmo Bay Creek Chum (local knowledge)
- Salmonid Streams: 10 observed, 10 assumed
- Herring spawning (2 spawns recorded)
- Eelgrass beds throughout (local knowledge)
- Moderate invertebrate values
- Seal haul out opposite Nimmo Bay (local knowledge)
- Finfish aquaculture potential: OA 1 (scattered); OA 2 (limited in Nimmo Bay)
- Good to moderate off bottom scallop and oyster capability throughout
- Good beach clam and oyster capability (Nimmo Bay and 1 site at head of Sound)
- Forest industry has identified potential log dump sites on south shore of MacKenzie Sound, north shore of MacKenzie Sound to Nimmo Bay
- Gwawaenuk traditional territory
- Adjacent Indian Reserves – Keogh, Quay

Current Uses & Activities

- First Nations: Fishing areas towards end of inlet and Nimmo Bay. Culturally significant areas and clam beaches throughout. Concerned about further development in area, such as timber harvesting and log handling.
- Log handling and storage (10); heli-log sites, camp tie-ups
- Tourism resort at Nimmo Bay
- Year round commercial tenures (1)
- Seasonal commercial tenures (1)
- Commercial prawn fishery, crab fishery

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- • Light Industrial
- ✓ Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- ✓ Marine Plant
- ✓ Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- ✓ General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

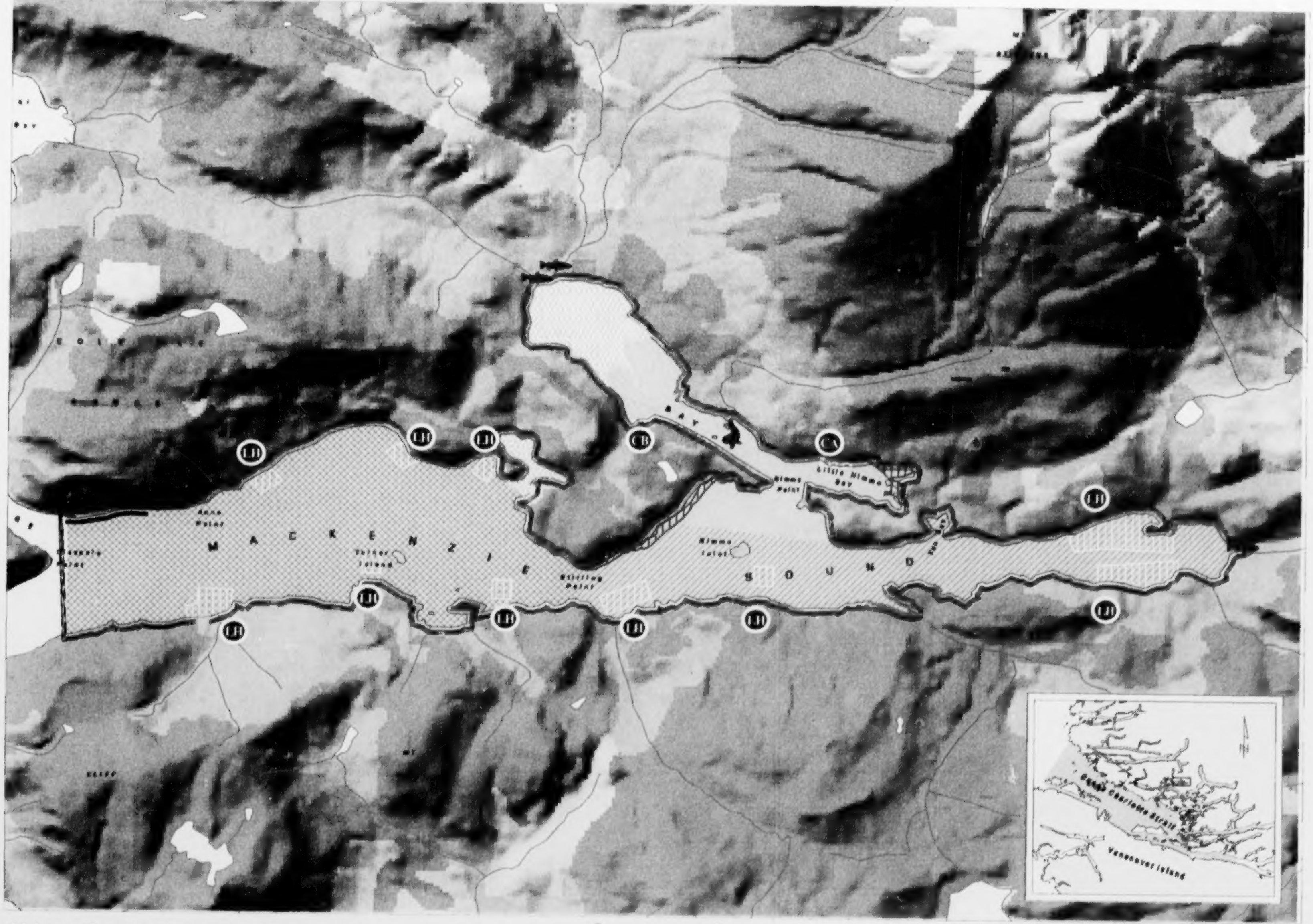
- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate existing commercial uses.
- Tenure applicants are encouraged to develop working relationships with Gwawaenuk First Nation.
- New tenures should not conflict with existing development.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- Commercial and industrial use applications within the unit should be referred to CWS.

34 - Mackenzie Sound (General Marine)


Anne Point
M A C K E N Z I E
Turner Island
Stirling Point
Nimmo Islet
S O U N D
Nimmo Point
Little Nimmo Bay
BAY
LH
CB
CA
Queen Charlotte Strait
Vancouver Island
N

Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

0 1
Kilometres
December 2002

Note: Some data may not be accurate at the scale depicted

Unit 35. Watson West

Marine Area	1419 ha	**Shoreline**	55.5 km
Substrate	mud	**Slope**	flat
Exposure	low	**Depth**	photic
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - Recreation

Description

This unit is popular for recreational boating. It offers several popular anchorages.

Unit Attributes

- The area north of Watson Island is significant for migratory birds (Scoters, Goldeneyes, gulls, grebes, Common Mergansers), and is a CWS area of interest
- Kelp beds (12 identified – 76 ha)
- Eelgrass throughout unit, especially Clayden and Carriden Bays, Embley Lagoon (local knowledge)
- Intertidal Clams (6 beaches – 71 ha)
- Salmon migration route, adult salmon holding areas; Coho and Pink salmon spawning at Embley Lagoon (local knowledge); Embley Pink salmon run through unit
- Salmonid Streams: 7 observed, 6 assumed
- Herring spawning (47 spawns recorded)
- Moderate to high prawn values
- Good to moderate off bottom scallop and oyster capability throughout
- Good beach clam and oyster capability in Claydon Bay
- Gwawaenuk traditional territory
- Adjacent Indian Reserves – Kunstamis, Lawanth, Magwekstala, Tlo Quxso

Current Uses & Activities

- First Nations: Culturally sensitive sites around Embley Lagoon, Claydon Bay, Burlington Island. Extensive fishing and shellfish harvest areas throughout. Concerned about impact of recreation uses and fish farms in adjacent Wells Passage on Embley lagoon Pink salmon runs, herring spawn.
- UREP/Recreation reserve at Turnbull Cove
- Remote campsite
- Boat haven at Claydon Bay (under Land Act notation of interest).
- Safe anchorage at Carriden Bay and Turnbull Cove
- Log handling and storage (4); barge ramp, logging camp
- Kayaking route
- Sport crab and clam fisheries
- Commercial crab, prawn and clam fisheries

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- ✓ Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

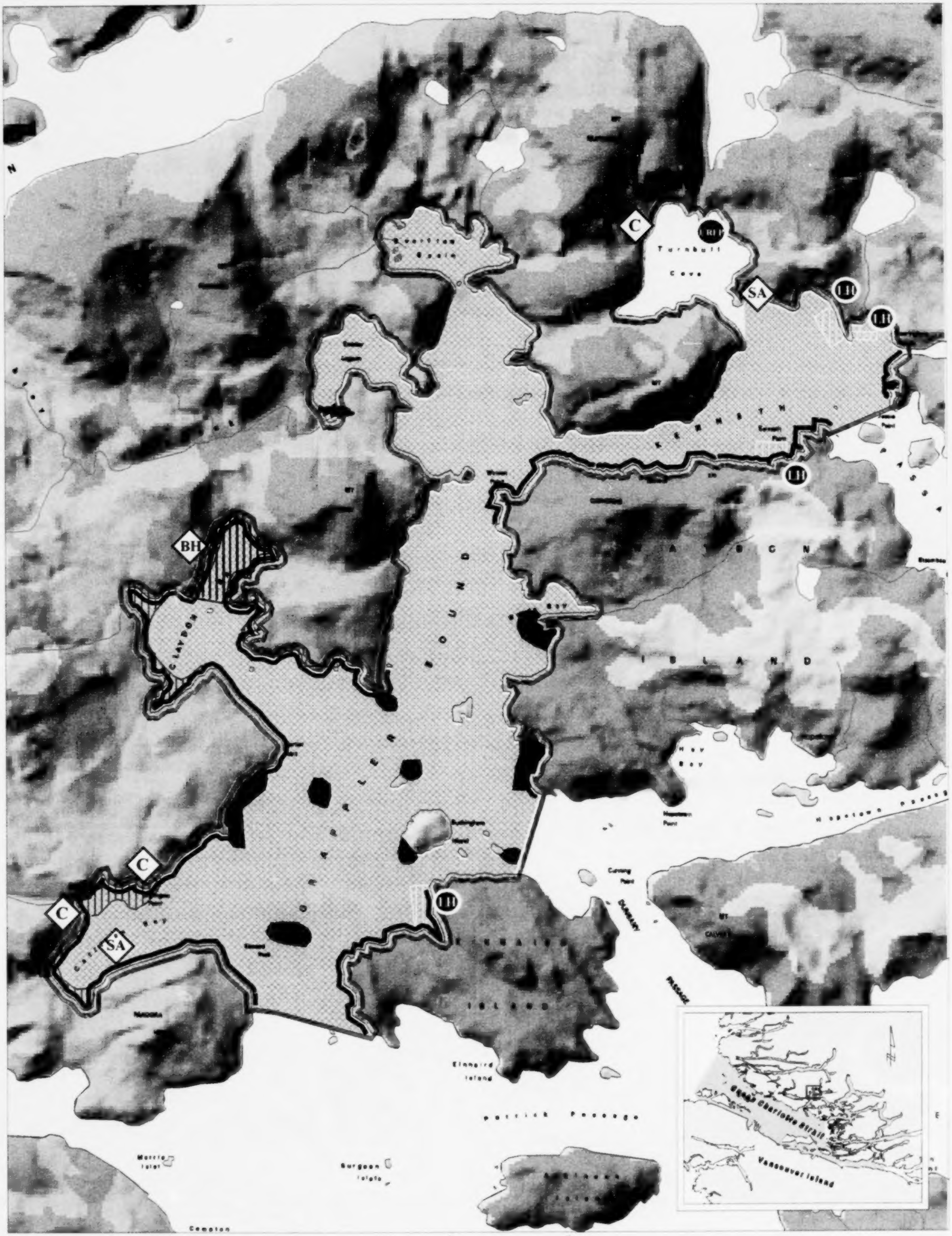
- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed for commercial and public recreation, and compatible uses.
- Maintain *Land Act* notation of interest over Claydon Bay boat haven.
- New tenures should not impede safe anchorage in Turnbull Cove and Carriden Bay.
- Tenure applicants are encouraged to develop working relationships with Gwawaenuk First Nation, especially commercial recreation.
- Opportunities should be maintained for beach use for commercial and public recreation.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- The regional district should address local recreational interests in its review of tenure referrals.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Commercial and industrial use applications in the unit north of Watson Island should be referred to CWS.

35 - Watson West (Recreation)


C
LRH
Turnbull
Cove
SA
LH
LH
K E N N E T H
LH
W A T S O N
I S L A N D
BH
C L A Y D O N
S O U N D
G R A P P L E R
C
C
SA
LH
K I N N A I R D
I S L A N D
Kinnaird
Island
Patrick Passage
Morris
Islet
Surgeon
Islets
Hopetown Passage
DUNSANY
PASSAGE
MT
CALVERT
Queen Charlotte Strait
Vancouver Island
N
E

Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

0 1
Kilometres
December 2002

Note: Some data may not be accurate at the scale depicted

Unit 36. Watson East

Marine Area	650 ha	**Shoreline**	36.0 km
Substrate	sand	**Slope**	flat
Exposure	low	**Depth**	photic
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis – General Marine

Description

Kenneth Passage and Hopetown Passage are narrow channels which have strong currents on spring tides.

Unit Attributes

- This unit is significant for migratory birds (Scoters, Goldeneyes, gulls, grebes, Common Mergansers), and is a CWS area of interest.
- High herring spawn values
- Major sea lion haulout in Kenneth Pass (local knowledge): The Northern Sea lion is a red listed species
- Adult salmon migration route for MacKenzie and Kenneth River runs (local knowledge)
- Clam beds
- Orca and Porpoise sightings in unit (local knowledge)
- Moderate invertebrate values
- Moderate prawn fishery values
- Kelp beds (12 identified – 76 ha)
- Good to moderate off bottom shellfish scallop and oyster capability (throughout)
- Moderate beach shellfish clam aquaculture capability (1 site in Kenneth Passage)
- Potential log dump sites north shore of Kenneth Passage and west shore of Hopetown Passage
- Gwawaenuk traditional territory
- Indian Reserves at Hopetown (Heg'ams) and Burly Bay; Hopetown is head village for Gwawaenuk traditional territory

Current Uses & Activities

- First Nations: Extensive shellfish areas throughout. Important fishing areas in Kenneth & Hopetown Passages. Culturally significant areas through Hopetown Passage. Concerned about contamination of shellfish beds by previous fish farms and existing farms in Wells Passage.
- Log handling and storage (2); heli-log site, heli-spots, camp tie-up
- Remote campsite
- Sport crab and clam fisheries
- Commercial crab and clam fisheries

Acceptable Uses & Activities

Tenured Uses

✓ Community & Public Institutional
X Light Industrial
O Marine Telecommunications & Utilities
X Rural Development

Aquaculture:

  X Finfish
  ✓ Marine Plant
  ✓ Shellfish Beach
  ✓ Shellfish Deep Water Aquaculture

✓ Conservation
✓ Log Handling, Storage & Infrastructure
X Private Moorage
✓ General Commercial

Commercial Recreation:

  ✓ Lodges and Base Camps
  ✓ Guiding Operations

Ongoing Non Tenured Activities

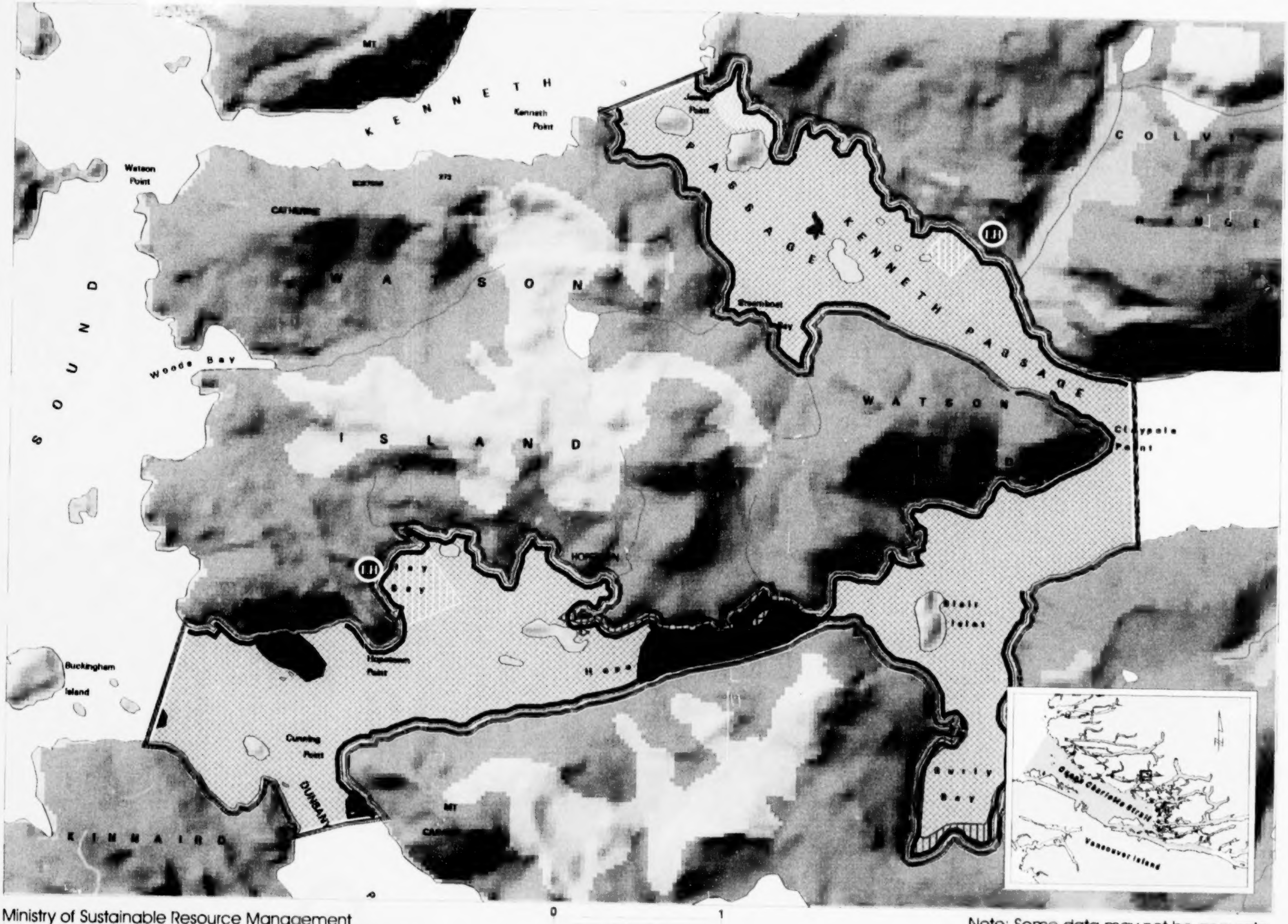
✓ Commercial Fisheries
✓ Marine Transportation
✓ First Nations
✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain existing commercial uses and accommodate shellfish aquaculture.
- Tenure applicants are encouraged to develop working relationships with Gwawaenuk First Nation.
- New tenures should be located and managed to minimize impact on migratory bird habitat.
- Shellfish aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.
- Commercial and industrial use applications within the unit should be referred to CWS.

36 - Watson East (General Marine)


MT
KENNETH
Kenneth Point
Watson Point
CATHERINE
272
WATSON ISLAND
SOUND
Woods Bay
PASSAGE
KENNETH PASSAGE
Steamboat Bay
COLVI
RANGE
WATSON
Claypole Point
Bay
Hopetown Point
Hope
Buckingham Island
Cunning Point
DUNSANY
KINNAIRD
MT
Islets
Burly Bay
Queen Charlotte Strait
Vancouver Island
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1

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Kilometres
December 2002

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Unit 37. Drury East

Marine Area	794 ha	**Shoreline**	31.9 km
Substrate	mud	**Slope**	flat
Exposure	low	**Depth**	shallow (0-5m) to mid depth (50-200m)
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - Conservation

Description

Stuart Narrows has significant kelp beds and strong currents. The unit is popular for kayaking and recreational cruising. The unit currently has no significant commercial activities.

Unit Attributes

- CWS area of interest: much of this unit is significant for migratory birds (Marbled Murrelets, Common Mergansers, Scoters, scaup, cormorants, loons, grebes, Rhinoceros Auklets, gulls)
- Kelp beds (4 identified – 121 ha)
- Intertidal Clams (10 beaches – 51 ha)
- Salmonid Stream: 1 observed, 10 assumed
- High shrimp values
- Moderate prawn values
- High clam values
- Finfish aquaculture potential: OA 2 (scattered)
- Good to moderate off bottom scallop and oyster capability (Stuart Narrows to mouth of Drury Inlet)
- Gwawaenuk traditional territory
- Indian Reserve at Gleyka

Current Uses & Activities

- First Nations: Fishing and shellfish areas at inlet entrance.
- Log transport through area; occasional log tie-up area
- Safe anchorage at Richmond Bay
- Sport crab, prawn & shrimp fisheries
- Commercial crab, prawn & shrimp fisheries

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development
- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Aquaculture:

- X Finfish
- ✓ Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

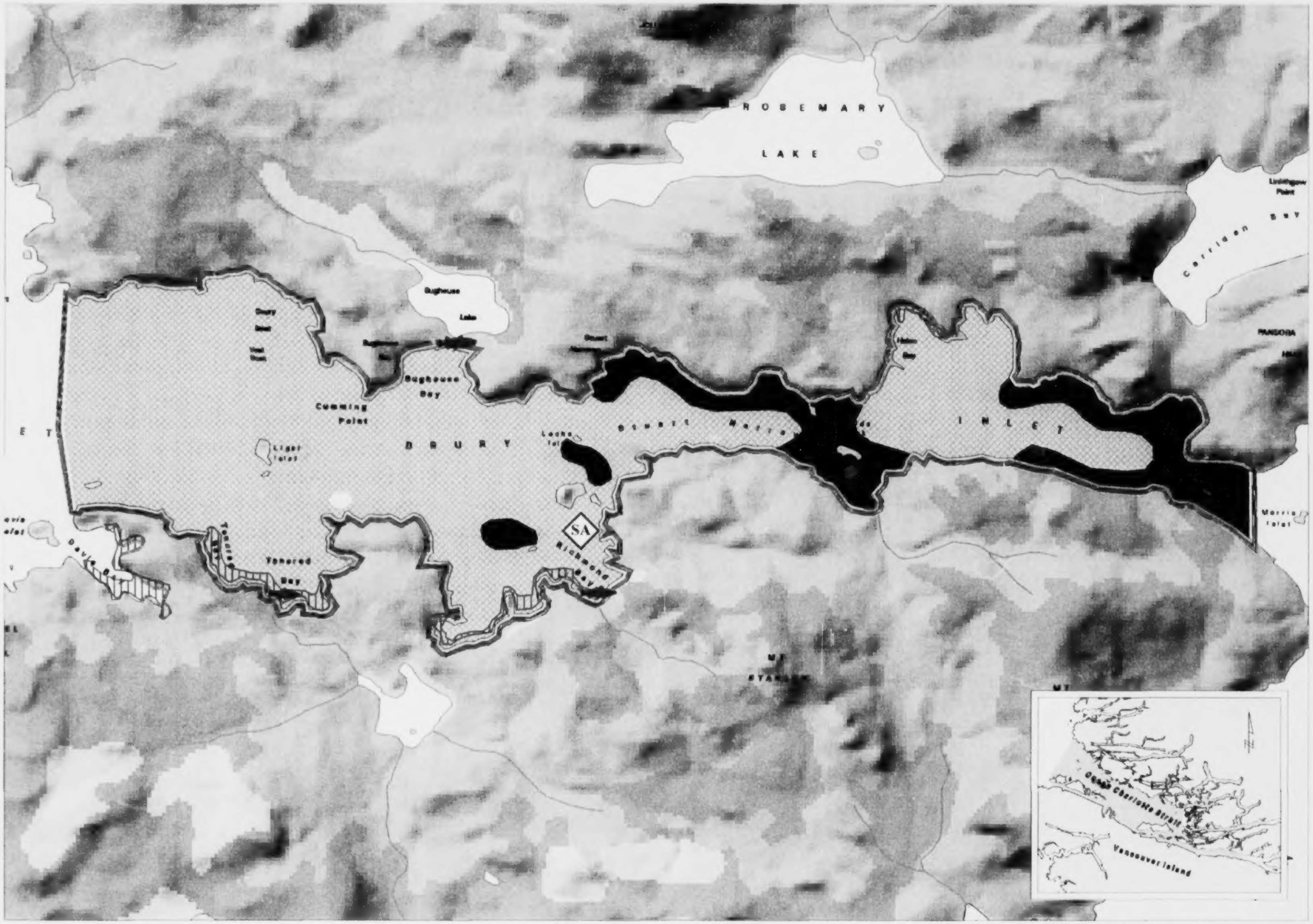
Code

✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain conservation values and promote compatible uses, while acknowledging continued exercise of First Nation food fishery, social and ceremonial rights.
- Tenure applicants are encouraged to develop working relationships with Gwawaenuk First Nation.
- New tenures should not impede safe anchorage in Richmond Bay.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Commercial and industrial use applications within the unit should be referred to CWS.

37 - Drury East (Conservation)


ROSEMARY
LAKE
Linlithgow Point
Carrigan Bay
PANDORA
Bughouse
Lake
Bughouse Bay
Cumming Point
Ligar Islet
DRURY
Stuart Narrows
INLET
SA
Richmond Bay
Tancred Bay
Davis Bay
MT STANTON
MT
Queen Charlotte Strait
Vancouver Island

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Kilometres
December 2002

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Unit 38. Drury West

Marine Area	3046 ha	**Shoreline**	106.2 km
Substrate	mud	**Slope**	flat
Exposure	low	**Depth**	photic
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis – General Marine

Description

The unit is a long twisting inlet. The unit accommodates considerable log handling and seasonal recreational use, but has relatively poor water circulation.

Unit Attributes

- Shoreline and nearshore areas on the lower extent of Drury Inlet are significant for migratory birds (scoters, scaup, diving ducks). This is a CWS area of interest.
- Intertidal Clams (12 beaches – 81 ha)
- Salmonid Streams 7 observed, 5 assumed
- Known juvenile salmon rearing area (local knowledge)
- Coho spawning areas at Davis Bay, O'Keefe Point, Macgowan Bay, Sutherland Bay, Tsibass lagoon; Pink spawning area at Jennis Bay; Sockeye spawning area in Tsibass lagoon (local knowledge)
- Moderate prawn values
- High shrimp values
- Finfish aquaculture potential: OA 2 (scattered)
- Good to moderate off bottom scallop and oyster capability (Drury Inlet to Jennis Bay)
- Moderate beach oyster and clam aquaculture capability (Jennis Bay)
- Forest industry has identified potential log dump sites along south shore of Drury Inlet, north shore west of Collinson Bay & all of Actaeon Sound, TsiBass Lagoon
- Gwawaenuk traditional territory
- Indian reserves (2) including Dove Island

Current Uses & Activities

- First Nations: Many shellfish harvest, seaweed gathering and fishing areas, especially along north shore and in Sutherland Bay. Culturally sensitive sites along north shore. Prawn and shrimp at Bond Peninsula. Concerned about recreational uses and log handling activities in unit, as well as fish farms in Wells Passage for potential impact on Coho and other fisheries.
- Log handling and storage (12); heli-log sites, camp tie-ups
- Seasonal commercial tenure (1)
- Dock at Jennis Bay
- Safe anchorage at Sutherland Bay
- Commercial shrimp and prawn fisheries, ground fish trawl

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- ✓ Marine Plant
- ✓ Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- ✓ General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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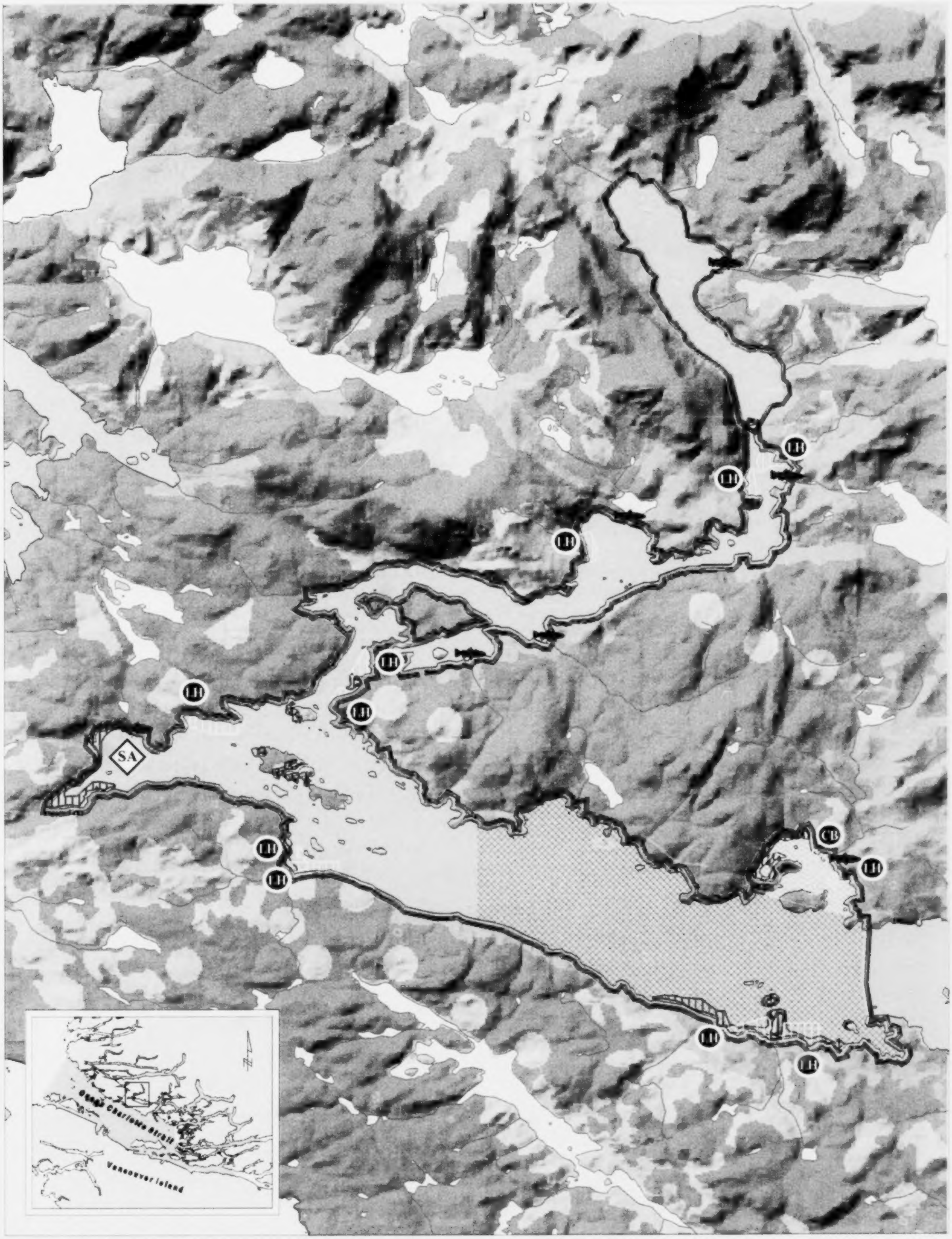
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate log handling and storage, and recreation that is sensitive to First Nation uses and activities and which minimizes impact on fisheries and sensitive ecosystems.
- Tenures should not impede safe anchorage in Sutherland Bay.
- Tenure applicants are encouraged to develop working relationships with Gwawaenuk First Nation.
- Log tow operators are encouraged to avoid prawn trap fishery areas.
- Shellfish aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- Commercial and industrial use applications within 1 km of the eastern entrance to the unit should be referred to CWS.

38 - Drury West (General Marine)


LH
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SA
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LH
CB
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LH
LH
Queen Charlotte Strait
Vancouver Island

Ministry of Sustainable Resource Management
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Kilometres
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Note: Some data may not be accurate at the scale depicted

Unit 39. Beaver, Telegraph Cove

Marine Area	691 ha	**Shoreline**	20.6 km
Substrate	sand	**Slope**	sloping
Exposure	low	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	moderate		

Management Emphasis - Community

Description

Telegraph Cove is an important staging area for whale watching, kayaking, and other tourism and recreation activities. Beaver Cove supports a variety of industrial uses.

Unit Attributes

- Waterfowl throughout area
- Kelp beds throughout (1 identified – 1 ha total area)
- Kokish estuary (29 ha total area)
- Adult salmon holding areas, major salmon stream (Kokish)
- Salmonid Streams: 8 observed, 6 assumed
- Moderate to high invertebrate values
- Moderate prawn values
- Moderate rockfish values
- Traditional territory of Namgis First Nation
- Upland is primarily privately owned

Current Uses & Activities

- First Nations: Extensive fishing throughout. Shellfish harvest and culturally significant areas throughout.
- Log handling & storage (2); upland lumber mill
- Fish processing plant
- Light industrial site -storage tanks
- Commercial wharf
- Year round commercial tenures (4)
- Marinas (2)
- Staging area for land & marine-based wildlife viewing
- Kayak staging area
- Road-accessible campsite (under *Land Act* Notation of Interest)
- Heritage/reserve (1)
- Recreational/residential (1) associated with log handling
- Fish/wildlife management (1) estuary
- Sport salmon fishery
- Commercial salmon troll, seine and gillnet fisheries, especially fall Chum salmon
- Upstream fish hatcheries (Kokish River) 1 Commercial Aquaculture; 1 Community
- Secondary north-south navigation route through unit (CCG)

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- ✓ Light Industrial
- ✓ Marine Telecommunications & Utilities
- ✓ Rural Development

Aquaculture:

- O Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- ✓ General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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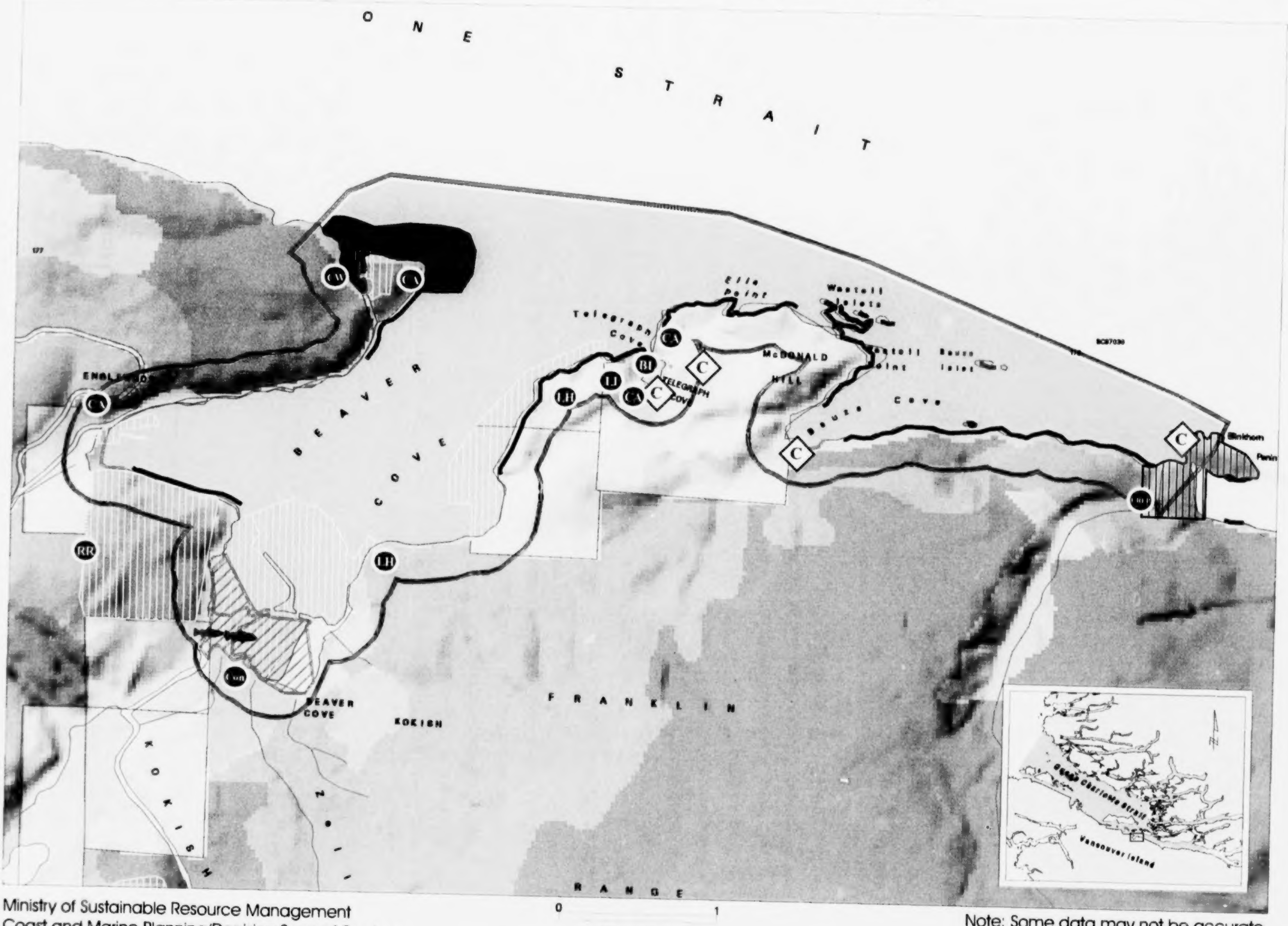
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain existing commercial and industrial uses while protecting the Kokish estuary.
- New tenures should complement the recreation and tourism focus in Telegraph Cove.
- New tenures should not impair heritage values.
- New tenures should not alienate recorded commercial dive fishery sites.
- Opportunities should be maintained for beach use for commercial and public recreation.
- Conditional finfish aquaculture uses require submission of supporting biophysical information with license or lease application.

39 - Beaver Cove Telegraph Cove (Community)


ONE STRAIT
BEAVER COVE
ENGLEWOOD
Telegraph Cove
TELEGRAPH COVE
Ella Point
Weynton Islets
McDONALD HILL
Weynton Point
Bauza Islet
Bauza Cove
Blinkhorn Penin
BEAVER COVE
KOKISH
KOKISH
NIMPKISH
FRANKLIN RANGE
CA
CW
RR
LH
BI
LI
C
Queen Charlotte Strait
Vancouver Island
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December 2002

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Unit 40. Hanson

Marine Area	1400 ha	**Shoreline**	17.7 km
Substrate	sand	**Slope**	sloping
Exposure	low	**Depth**	photic
Current	high	**Benthic Summer Temp**	warm
Roughness	moderate		

Management Emphasis - Recreation

Description

The area is characterized by rugged shoreline and pocket beaches. This unit is critical habitat for whales, and is a popular destination for sea kayakers and whale watching businesses. It also experiences considerable marine traffic.

Unit Attributes

- Important orca habitat: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Kelp beds throughout (2 identified – 33 ha)
- Finfish aquaculture potential: OA1
- Traditional territory of Tlowitsis and Namgis
- Hanson Island upland recently established as OIC protection area under CCLRMP process until June 30, 2003

Current Uses & Activities

- First Nations: Extensive fishing activity in Johnstone Strait with shellfish harvest and culturally significant areas along Hanson Island
- Marine based wildlife viewing
- Marine transportation: secondary north-south navigation route through unit (CCG)
- Scuba diving
- Kayaking destination area; kayaking routes throughout
- Remote campsites, campsite at Blinkhorn Peninsula is subject to a *Land Act* Notation of Interest
- Commercial salmon troll, gillnet, seine fisheries; prawn fishery

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

  - X Finfish
  - X Marine Plant
  - X Shellfish Beach
  - X Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Commercial Recreation:

  - X Lodges and Base Camps
  - ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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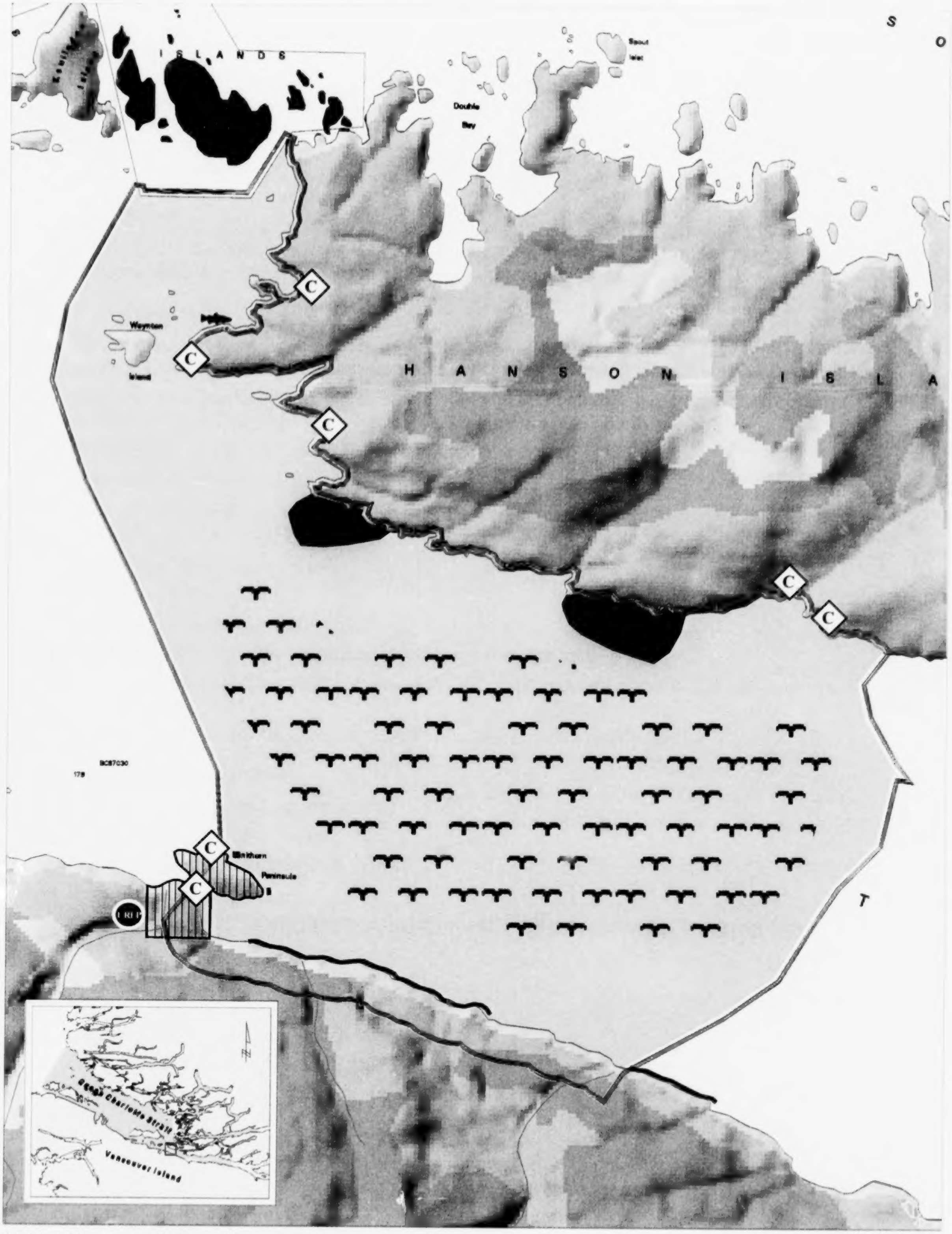
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain recreational opportunities and uses compatible with any future protection area management regime, while recognizing marine transportation requirements.
- New tenures should be compatible with any future protection area planning or designation of adjacent upland on Hanson Island.
- Tenure approvals should be deferred adjacent to Hanson Island until June 30, 2003 or sooner to accommodate completion of collaborative management discussions.
- MSRM & LWBC should work with affected groups, the regional district and the Tlowitsis and Namgis First Nations to develop a strategy for management and allocation of campsites in this unit for both recreational and tourism uses.
- Conflicts should be minimized between whale watching and marine transportation activities.
- Foreshore tenures should be located to avoid seine fishery shore tie-ups.
- The regional district should address local recreational interests in its review of tenure referrals.
- Opportunities should be maintained for beach use for commercial and public recreation.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

40 - Hanson (Recreation)


ISLANDS
Scout Islet
Double Bay
S
O
C
Weynton Island
C
HANSON ISLAND
C
C
C
BC87030
179
C
Blinkhorn Peninsula
C
T
Queen Charlotte Strait
Vancouver Island

Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

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Kilometres
December 2002

Note: Some data may not be accurate at the scale depicted

Unit 41. Blackfish Sound

Marine Area	2240 ha	**Shoreline**	46.5 km
Substrate	hard	**Slope**	flat
Exposure	low	**Depth**	photic
Current	high	**Benthic Summer Temp**	warm
Roughness	moderate		

Management Emphasis - Recreation

Description

Blackfish Sound is recognized as an area of important whale habitat. The unit has high value for recreation and tourism and is a major marine transportation corridor.

Unit Attributes

- This unit is significant for migratory birds (marbled murrelets, bald eagles, Mew Gulls, Rhinoceros Auklets, Common Murres, Phalaropes, gulls Sooty Shearwaters), it is a CWS area of interest.
- Important orca habitat: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Holding area for adult salmon, salmon migration route
- High rockfish values
- High invertebrate values
- Shellfish capability not confirmed
- Kelp beds (2 identified – 15 ha)
- Non-native cultural feature (1)
- Finfish aquaculture potential: OA 1
- Traditional territory of Mamalilikula and Namgis First Nations
- Hanson Island upland recently established as OIC protection area under CCLRMP process until June 30, 2003
- Private land at Double Bay(Hanson) and Freshwater Bay(Swanson Island)

Current Uses & Activities

- First Nations: No information provided
- Marine based wildlife viewing
- Kayak route and destination area
- Remote campsites
- Boat Anchorages at: Double Bay and Spout Islet Cove (Hanson Island), Parson Bay (Harbledown Island)
- Marina at Double Bay
- Year round commercial tenure (3)
- Log handling and storage (1); heli-sites
- Sport salmon fishery, halibut and rock fishery
- Commercial salmon troll, gillnet, seine fisheries; prawn fishery; hook & line ground fishery
- Principle north-south navigation route through unit (CCG)

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- ✓ Marine Telecommunications & Utilities
- X Rural Development
- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Aquaculture:

- X Finfish
- O Marine Plant
- O Shellfish Beach
- O Shellfish Deep Water Aquaculture

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

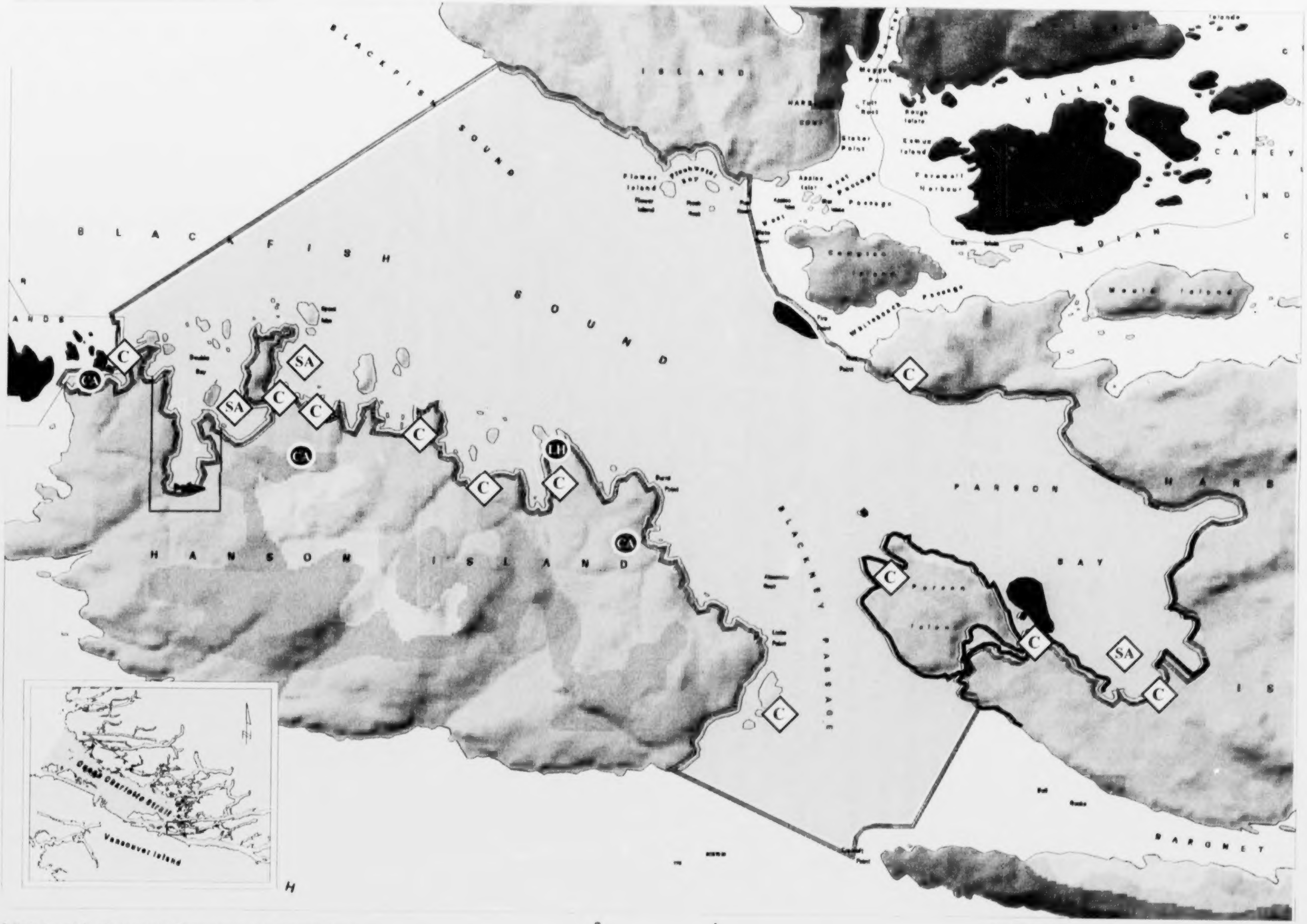
- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain recreation and tourism opportunities and uses, while recognizing marine transportation requirements.
- New tenures should be compatible with any future protection area planning or designation of adjacent upland on Hanson Island.
- Tenure approvals should be deferred adjacent to Hanson Island until June 30, 2003 or sooner to accommodate completion of collaborative management discussions.
- MSRM & LWBC should work with affected groups, the regional district and the Mamalilikula and Namgis First Nations to develop a strategy for management and allocation of campsites in this unit for both recreational and tourism uses.
- New tenures should not impede safe anchorage in Spout Islet Cove, Double Bay, Parson Bay.
- Foreshore tenures should avoid seine fishery shore tie-ups.
- New tenures should not alienate recorded commercial dive fishery sites.
- The regional district should address local recreational interests in its review of tenure referrals.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Conditional shellfish and marine plant aquaculture uses require submission of supporting biophysical information with license or lease application.
- Commercial and industrial use applications within the unit should be referred to CWS.

41 - Blackfish Sound (Recreation)


BLACKFISH SOUND
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BLACKNEY PASSAGE
PARSON BAY
ISLAND
VILLAGE
INDIAN
CAREY
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BARONET
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Freshwater Bay
Compton Island
Parson Island
Mound Island
Farewell Harbour
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December 2002

Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

Note: Some data may not be accurate at the scale depicted

Unit 42. Cormorant Channel

Marine Area	14034 ha	**Shoreline**	124.3 km
Substrate	sand	**Slope**	flat
Exposure	low	**Depth**	photic
Current	low - high	**Benthic Summer Temp**	cold
Roughness	low		

Management Emphasis - Community

Description

The shorelines of Port McNeill, Alert Bay and Sointula are within this unit. The unit is characterized by concentrated coastal uses and activities associated with these settlements.

Unit Attributes

- CWS area of interest: most of the Vancouver Island nearshore and shoreline, including Port McNeill and the Nimpkish bank is significant for aquatic birds (Comon Murre, Pacific Loon, gulls, Trumpeter Swans, Canada geese, Bufflehead, Mergansers, Surf Scoters, Mallards, Geen-winged Teal, Goldeneye, scaup, grebes, dabbling ducks; Plumper Island and Stephenson Islet contain important breeding colonies of Pigeon Guillemot, Black Oystercatcher, Glaucous-winged Gull.
- The marine bottom areas of this unit are habitat of the 20-Tentacled Thyonidium Sea Cucumber, rated provincially as critically imperiled (S1) and classified as a red listed species
- Kelp Beds (9 identified - 139 ha)
- Moderate to high invertebrate values
- Intertidal Clams (1 beach identified – 9 ha)
- Holding areas for adult salmon
- Salmonid Streams: 26 observed, 5 assumed
- Significant estuary: Nimpkish River
- Important orca habitat (eastern portion of unit): Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Cormorant Channel Marine Park in unit is known to host red listed Pomegranate Aeolids and Raspberry Hydroids (marine benthic organisms)
- Finfish aquaculture potential: OA 1 (middle half of unit)
- Good to moderate beach clam and oyster capability (Mitchell Bay and Meynett Pt.)
- Good to moderate off bottom scallop and oyster capability (north end of Broughton Strait between Malcolm Island and Port McNeill)
- Douglas Treaty area, Traditional territory of Namgis and Kwakiutl First Nations
- Indian Reserves – Alert Bay, Cheslakes, Ksuildas, Kuldekduma, Klickseewy, Malcolm Island
- Extensive private upland parcels

Current Uses & Activities

- First Nations: Extensive fishing, shellfish, and culturally significant areas throughout
- Light industrial uses (3)-storage tanks
- Log handling and storage (5)
- Boat haven – Dickson Island
- Marinas (3)
- Commercial wharfs (3)

- Public wharfs (5)
- Ferry terminal
- Private moorage (2)
- Utility lines (15)
- Transportation activities
- Marine based wildlife viewing
- Kayak staging areas
- Scuba diving sites (5); swimming, beachcombing
- Secondary north-south navigation route through unit (CCG)
- Year round commercial tenures (15)
- Seasonal commercial tenures (2)
- Road-accessible campsites (2)
- Local/regional parks (3)
- Sport crab, salmon, ground fisheries
- Commercial salmon troll, gillnet, seine fisheries; hook & line, longline ground fishery; urchin fishery
- Seine fishery for hatchery brood stock

Acceptable Uses & Activities

Tenured Uses

✓ Community & Public Institutional
✓ Light Industrial
✓ Marine Telecommunications & Utilities
X Rural Development

✓ Conservation
✓ Log Handling, Storage & Infrastructure
✓ Private Moorage
✓ General Commercial

Aquaculture:

✓ Finfish is not listed as acceptable; the marks are:

X Finfish
✓ Marine Plant
✓ Shellfish Beach
✓ Shellfish Deep Water Aquaculture

Commercial Recreation:

X Lodges and Base Camps
O Guiding Operations

Ongoing Non Tenured Activities

✓ Commercial Fisheries
✓ Marine Transportation

✓ First Nations
✓ Public Recreation

Code	
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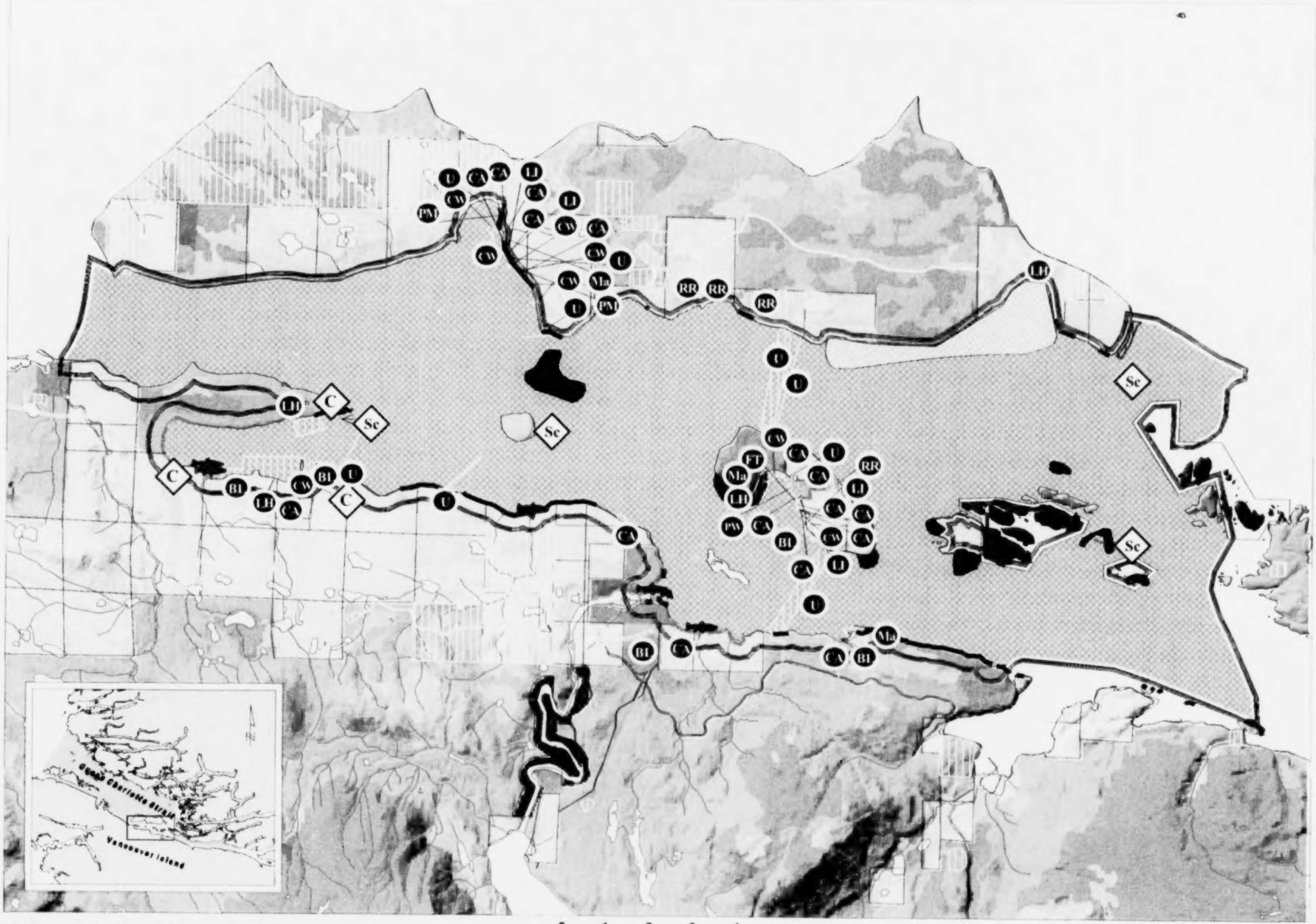
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate a variety of existing uses and activities while protecting the Nimpkish River estuary.

- Foreshore and nearshore uses on Malcolm Island must be consistent with the Malcolm Island Official Community Plan.
- Commercial and industrial development should be concentrated in existing settlement areas.
- Shellfish beach culture should be sited to avoid impact from upland residential development.
- Licences or permits for commercial recreation guiding use of this unit are conditional on operating practices that follow established guidelines and / or performance based standards for minimizing impacts on bird colonies and migratory bird habitat.
- New tenures should not alienate recorded commercial dive fishery sites
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- New tenures should be sited and managed to minimize impact on the Nimpkish mud flats.
- Opportunities should be maintained for beach use for commercial and public recreation.
- All applications for use within 1km of estuaries and bird colonies should be referred to CWS.

42 - Cormorant Channel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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

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December 2002

Note: Some data may not be accurate at the scale depicted

Unit 43. Cluxewe Keogh

Marine Area	3961 ha	**Shoreline**	27.2 km
Substrate	sand	**Slope**	flat
Exposure	moderate	**Depth**	shallow (0-5m) to mid-depth (50-200m)
Current	low	**Benthic Summer Temp**	warm to cold
Roughness	low		

Management Emphasis - Conservation

Description

Shoreline in this unit generally has low relief. The unit contains extensive kelp beds and an estuary. The unit supports a variety of important recreational uses and activities.

Unit Attributes

- CWS areas of interest: the Vancouver Island shoreline and portions of the nearshore in this unit are significant for aqatic birds (Trumpeter Swans, Bufflehead, Surf Scoters, Mallard, Green-winged Teal, Canada Geese, Mergansers, loons, Harlequin Ducks, scaup, greebes, goldeneye, cormorant).
- Bald Eagle nesting sites (15)
- Kelp beds (12 identified – 934 ha total area)
- Blue-listed Bog Rushes(globally secure, provincially vulnerable to imperiled G5 S2S3) and the Queen Charlotte Butterweed (globally and provincially vulnerable G3 S3)have been identified in the Suquash Fen
- Estuary – 70 ha: Keogh, Cluxewe
- Moderate to high invertebrate values
- High commercial sea cucumber and urchin values (local knowledge)
- Intertidal Clams (3 beaches – 36 ha)
- Salmonid Streams 15 observed, 9 assumed
- Migration route for Nimpkish, Keogh, Cluxewe river salmon (local knowledge)
- Significant herring spawn values (8 spawns recorded)
- Seal haulout or rafting site (2 identified)
- Historically high value abalone beds
- Finfish aquaculture potential: OA 1 (very limited at eastern end)
- Kwakiutl traditional territory; Douglas Treaty Area
- Adjacent Indian Reserves – Keogh, Klickseewy, Thomas Point
- Offshore energy tenures (2) for coalbed methane and natural gas

Current Uses & Activities

- First Nations: Extensive fishing with numerous areas of cultural significance
- Kayak staging area
- Upland commercial use
- Road accessible campsite at Cluxewe
- Commercial float at Cluxewe
- Fish and wildlife management
- Sport salmon, ground fishery
- Airports/airstrips
- Sewer/effluent line
- Commercial salmon troll, gillnet, seine fisheries; crab fishery; hook & line, longline ground fisheries

- Commercial dive fishery for sea cucumbers and urchins (local knowledge)
- Navigation route to Port Hardy through unit (CCG)

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- ✓ Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
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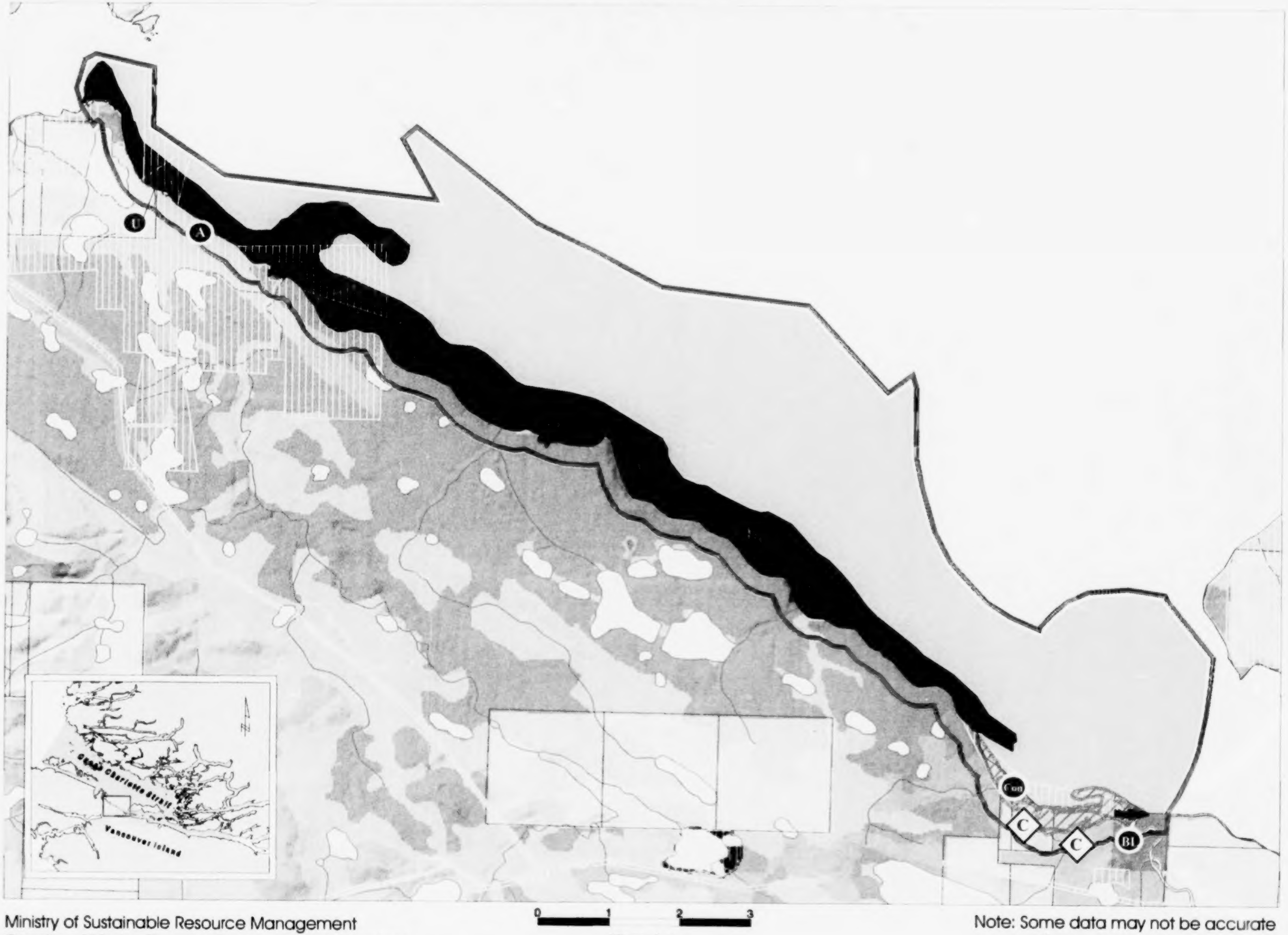
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain conservation values while promoting compatible recreational opportunities.
- Recreational activities and tenures should be managed to avoid conflict with First Nations activities.
- New tenures should not alienate recorded commercial dive fishery sites.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Tenures should be sited to avoid blue listed species sites in vicinity of Suquash Fen.

43 Cluxewe Keogh (Conservation)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Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

December 2002

Note: Some data may not be accurate at the scale depicted

Unit 44. North Malcolm

Marine Area	3979 ha	**Shoreline**	32.6 km
Substrate	hard (west) sand (east)	**Slope**	flat
Exposure	moderate	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	cold (west) warm (east)
Roughness	low		

Management Emphasis - Recreation

Description

This unit is characterized by moderate exposure, high westerly winds (summer), and low current shoreline along the north side of Malcolm Island. The unit contains extensive kelp beds and experiences considerable public recreation use by local residents.

Unit Attributes

- Important orca habitat: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Moderate prawn values
- High invertebrate values
- Kelp beds (35 identified – 829 ha)
- Traditional territories of Kwakiutl and Namgis First Nations
- Potential for kelp aquaculture
- Private holding at Black Bluff

Current Uses & Activities

- First Nations: Extensive fishing and shellfish areas along entire coast with one area of cultural significance
- Marine based wildlife viewing
- Boat ramp
- Swimming, beachcombing
- Electric power lines (3)
- Sand & gravel extraction (1)
- Sport salmon, ground fishery
- Commercial salmon troll, gillnet, seine fisheries; hook & line, longline ground fisheries; urchin fishery
- Regional parks at Bear Point, Lizard Point

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- ✓ Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- O Marine Plant
- O Shellfish Beach
- O Shellfish Deep Water Aquaculture

- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- X General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
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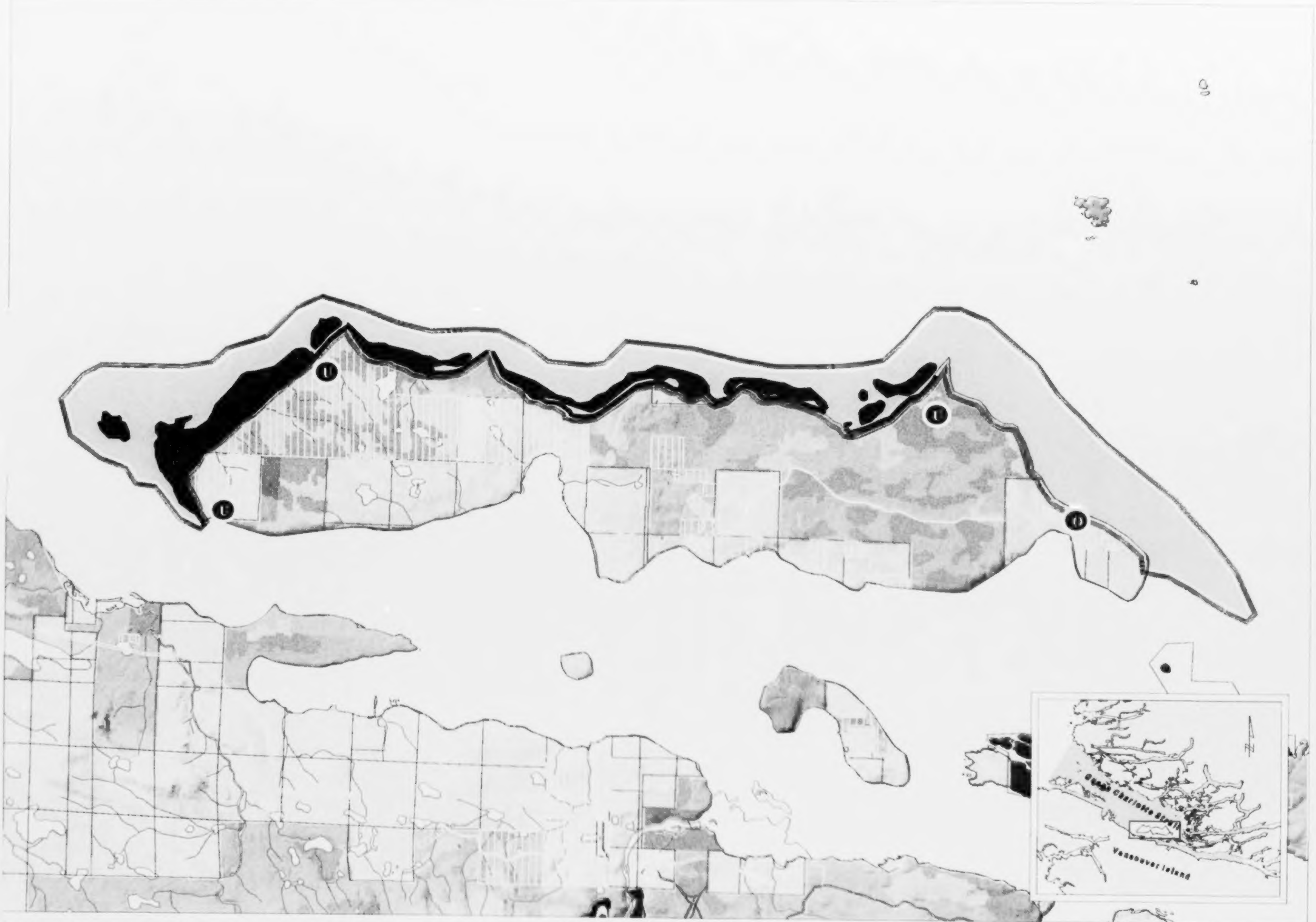
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain opportunities for public recreation.
- Foreshore and nearshore uses on Malcolm Island must be consistent with the Malcolm Island Official Community Plan.
- New tenures should not alienate recorded commercial dive fishery sites.
- The regional district should address local recreational interests in its review of tenure referrals.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Conditional shellfish and marine plant aquaculture uses require submission of supporting biophysical information with license or lease application.

44 - North Malcolm (Recreation)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Kilometres

Ministry of Sustainable Resource Management
Coast and Marine Planning/Decision Support Services

December 2002

Note: Some data may not be accurate at the scale depicted

Unit 45. Beaver Harbour

Marine Area	1,749 ha	**Shoreline**	30.2 km
Substrate	sand	**Slope**	flat
Exposure	moderate	**Depth**	shallow (0-5m)
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - Community

Description

The unit contains extensive clam beaches, virtually all of which are subject to a sanitary closure. The unit also contains significant First Nations uses.

Unit Attributes

- This unit is significant for waterfowl and migratory birds(scaup, scoters, Bufflehead, Harlequin Ducks, Canada Geese, gulls) and is a CWS area of interest.
- Bald Eagle nesting sites (4)
- Kelp beds (2 identified – 27 ha)
- Salmonid Streams: observed, 3 assumed; salmon migration route
- Seal haulout or rafting site – Round Island
- Moderate to high invertebrate values
- Intertidal Clams subject to sanitary closure (5 beaches – 150 ha)
- High herring spawn values (21 spawns recorded)
- Finfish aquaculture potential: OA 1 (Dillon Point)
- Traditional territory of Kwakiutl First Nation
- Adjacent Indian Reserves – Fort Rupert, Kippase, Shell Island, Thomas Point
- Private land- all of Deer Island

Current Uses & Activities

- First Nations: No information provided
- Kayak staging area
- Scuba diving in vicinity of Masterman Island
- Local/regional park
- Swimming, beachcombing
- Boat launch site
- Sewer/effluent line
- Electric power line
- Sand and gravel
- Navigation Aid
- Walking trail along coastline from Dillon Point to Patrician Cove
- Commercial gillnet, salmon troll fisheries
- Navigation route to Port Hardy through unit (CCG)

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- ✓ Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

  - X Finfish
  - O Marine Plant
  - X Shellfish Beach
  - X Shellfish Deep Water Aquaculture

- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- ✓ General Commercial

Commercial Recreation:

  - X Lodges and Base Camps
  - ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
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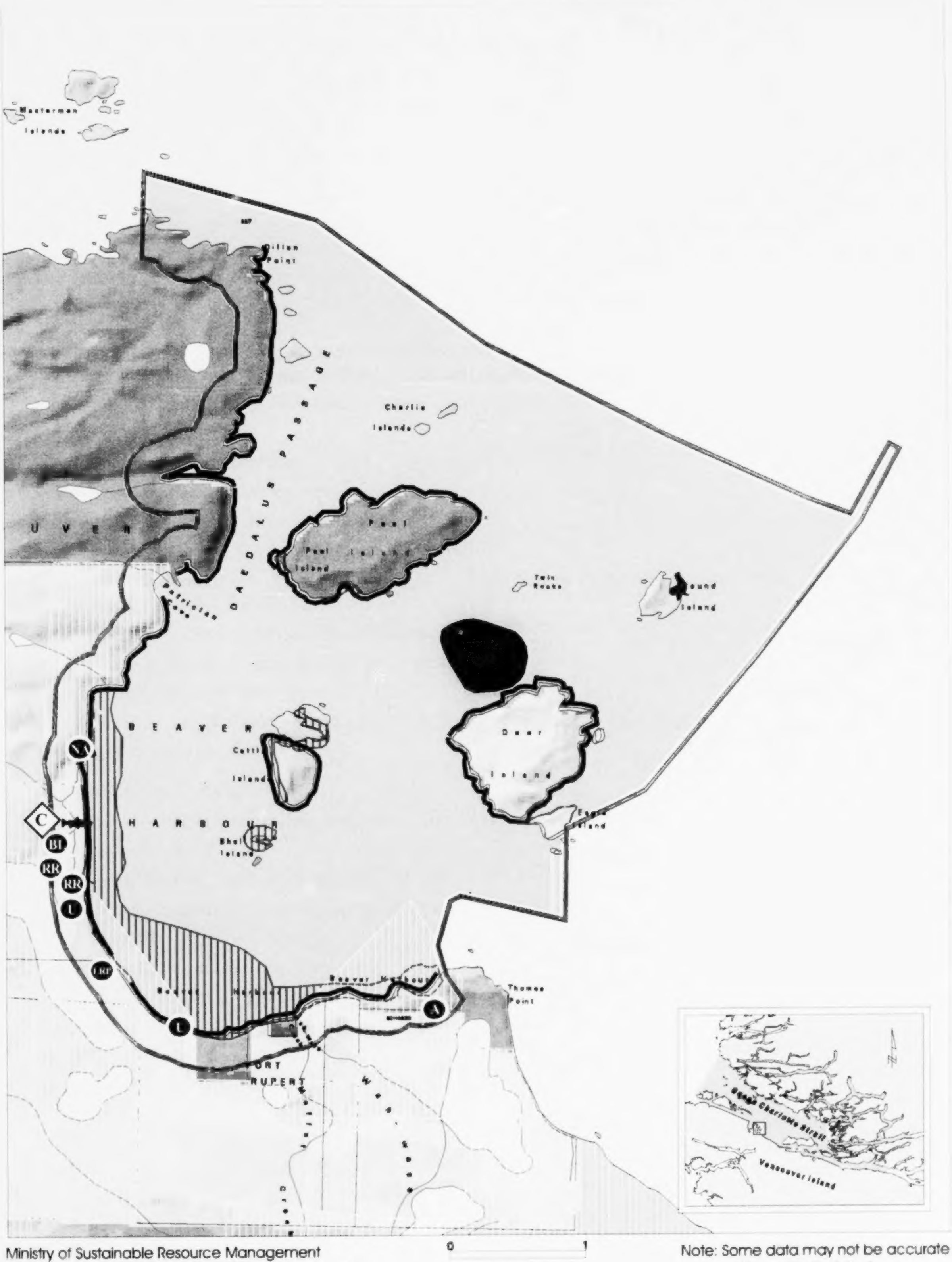
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain marine habitat, and to sustain First Nations activities while accommodating limited and compatible commercial activities.
- New tenures should minimize impact on public recreation and First Nations activities.
- New tenures should not alienate recorded commercial dive fishery sites.
- Opportunities should be maintained for beach use for commercial and public recreation.
- Commercial and industrial use applications within the unit should be referred to CWS.
- Conditional marine plant aquaculture uses require submission of supporting biophysical information with license or lease application.

45 - Beaver Harbour (Community)


Masterman
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DAEDALUS PASSAGE
Charlie
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UVEN
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Ministry of Sustainable Resource Management
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Kilometres
December 2002

Note: Some data may not be accurate at the scale depicted

Unit 46. Port Hardy

Marine Area	2010 ha	**Shoreline**	36.0 km
Substrate	sand	**Slope**	sloping
Exposure	moderate	**Depth**	mid-depth
Current	low	**Benthic Summer Temp**	warm
Roughness	low		

Management Emphasis - Community

Description

The area is characterized by a significant estuary, seaward of which is a deep water harbour and shoreline that accommodates a variety of development activities.

Unit Attributes

- This unit is significant for migratory waterfowl and shorebirds (Scoters, American Widgeon, Green-winged teal, Mallard, Trumpeter Swans, Phalaropes, dabbling ducks), it is a CWS area of interest.
- Kelp beds throughout (1 identified – 17 ha)
- Estuary (22 ha)
- Moderate invertebrate values
- Intertidal Clams (2 beaches – 89 ha)
- Salmonid Streams: 3 observed, 11 assumed
- High herring spawn values (13 spawns recorded)
- Grey whale bottom feeding in soft sediment of Hardy Bay: provincially blue listed (rated vulnerable to critically imperiled S1S3)
- Finfish aquaculture potential: OA 1 (limited)
- Shellfish aquaculture capability not confirmed
- Kwakiutl traditional territory
- Adjacent Indian Reserve – Tsulquate: (Gwa'Sala Nakwaxda'xw First Nation)
- Extensive private upland

Current Uses & Activities

- First Nations: No information provided
- Public wharves (3)
- Commercial wharf at Ferry Terminal
- Light industrial sites (4)-petroleum product storage
- Marinas (2)
- Sea Kayak staging area
- Log handling and storage (4)
- Salmon farm, one application for Daphne Point/Masterman Islands includes two sites
- Year round commercial tenures (10)
- Seasonal commercial tenure
- Residential Use
- Navigation Aid
- Utility lines (4)
- Scuba diving site
- Road-accessible campsite

- Conservation management areas (6): in the Port Hardy estuary
- Sport salmon, ground fisheries
- Commercial crab fishery; hook & line, longline ground fisheries
- Active local navigation channel (CCG)

Acceptable Uses & Activities

Tenured Uses

✓ Community & Public Institutional
✓ Light Industrial
✓ Marine Telecommunications & Utilities
X Rural Development

Aquaculture:

✓ Finfish
O Marine Plant
O Shellfish Beach
O Shellfish Deep Water Aquaculture

✓ Conservation
✓ Log Handling, Storage & Infrastructure
✓ Private Moorage
✓ General Commercial

Commercial Recreation:

X Lodges and Base Camps
✓ Guiding Operations

Ongoing Non Tenured Activities

✓ Commercial Fisheries
✓ Marine Transportation

✓ First Nations
✓ Public Recreation

Code

✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
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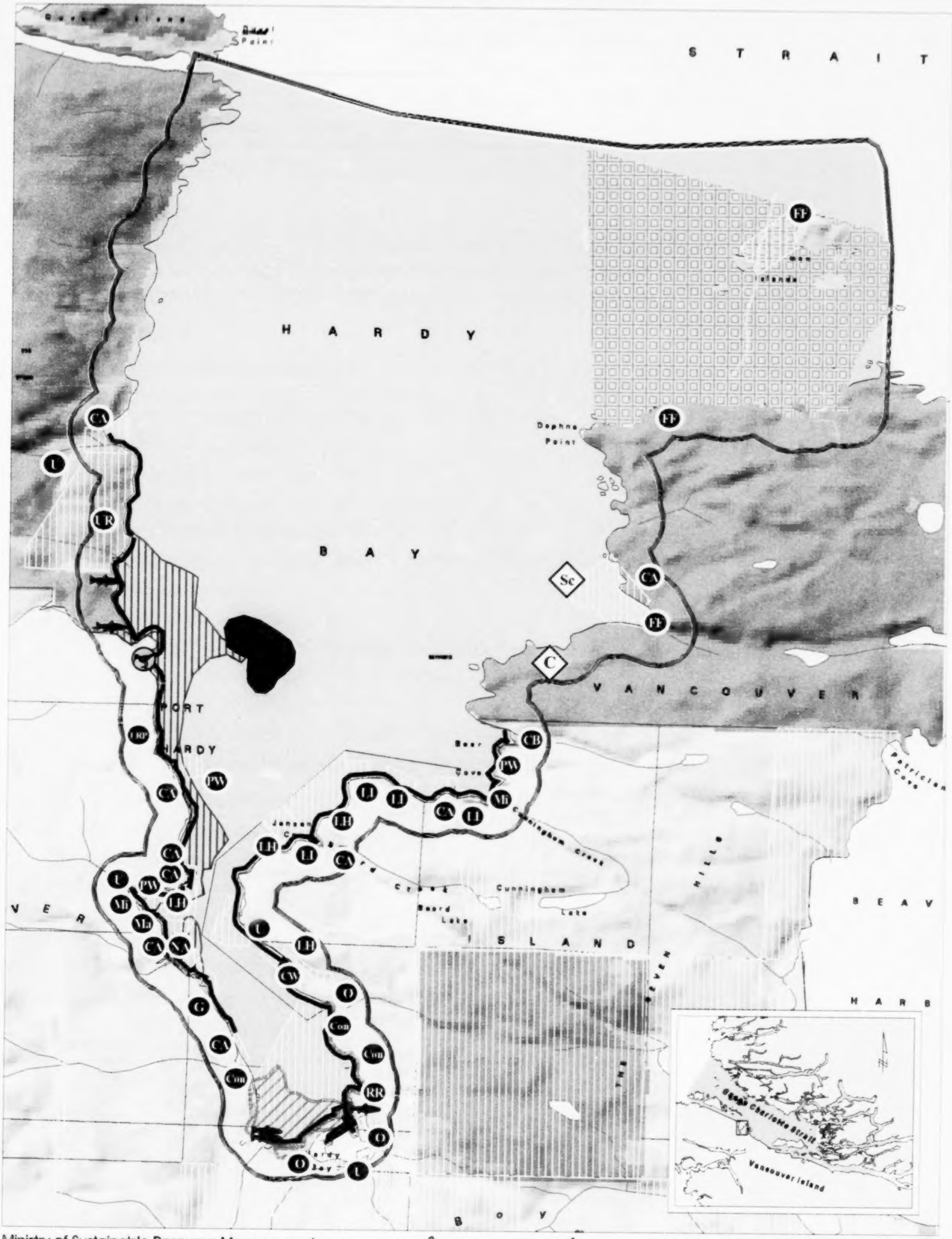
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to enable economic development associated with the Town of Port Hardy.
- New tenures should not alienate recorded commercial dive fishery sites.
- New tenures should be sited and managed to minimize effect on the Port Hardy estuary.
- New tenures should be compatible with the Port Hardy Strategic Plan 2002-2007 for adjacent upland areas.
- All applications for use within 1km of the Port Hardy estuary should be referred to CWS.
- Conditional shellfish and marine plant aquaculture uses require submission of supporting biophysical information with license or lease application.

46 - Port Hardy (Community)



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Bear Cove
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ISLAND
PORT HARDY
Cunningham Lake
Beard Lake
THE SEVEN HILLS
Patrick Cove
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Hardy Bay
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Note: Some data may not be accurate at the scale depicted

Unit 47. Nigei Gordon Group

Marine Area	6092 ha	**Shoreline**	98.7 km
Substrate	hard	**Slope**	sloping
Exposure	moderate	**Depth**	photic
Current	high	**Benthic Summer Temp**	cold
Roughness	moderate		

Management Emphasis - Conservation

Description

The unit encompasses God's Pocket provincial marine park. It is characterized by several important scuba diving sites including Browning Pass, diverse species including sea lions, marine mammals and waterfowl. Recreational activities in Browning Pass occasionally conflict with marine transportation.

Unit Attributes

- CWS areas of interest: Glaucous–Winged gull breeding sites along portions of the Gordon Islands, and Bald Eagle nesting sites (24) especially along Balaclava Island shoreline; Doyle Rocks and Crane Island contain breeding colonies for Glaucous-winged Gull
- Kelp beds: (13 recorded – 110 ha)
- Moderate to high invertebrate values
- Shellfish aquaculture capability not confirmed
- Intertidal Clams (4 beaches – 24 ha)
- Seal/sea lion haulout or rafting sites: (4 recorded): The Northern Sea lion is a red listed species
- High rockfish values
- Non-native cultural features (2)
- Gordon Islands – opportunity for additional finfish sites
- Finfish aquaculture potential: OA 1 (scattered)
- Kwakiutl traditional territory
- Adjacent Indian Reserves (2) – Glen-Gla-Ouch, Wakems
- Private land on central Balaklava, Cascade Harbour and Heard Islands

Current Uses & Activities

- First Nations: Shellfish areas on Gordon Islands. Fishing areas throughout with some culturally significant areas on Nigei Island
- Scuba diving sites (5) – Browning Pass (3) contains Browning Wall, one of best cold water dive sites on Pacific Coast.
- Remote campsites
- Private moorage (1) – Cascade Harbour (Marina)
- Year round commercial tenures (2)
- Salmon farms (3) including 1 slated for relocation
- Log handling and storage sites (1); upland logging camp
- Water-line (1); Sewer/effluent line (1)
- Sport salmon, ground fisheries
- Commercial urchin fishery; salmon troll, gillnet, seine fisheries; hook & line, longline ground fisheries
- Browning and Christie Pass both used for navigation and transport (CCG)

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- ✓ Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- • Finfish
- O Marine Plant
- O Shellfish Beach
- O Shellfish Deep Water Aquaculture

- ✓ Conservation
- • Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- ✓ General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- O Guiding Operations

Ongoing Non Tenured Activities

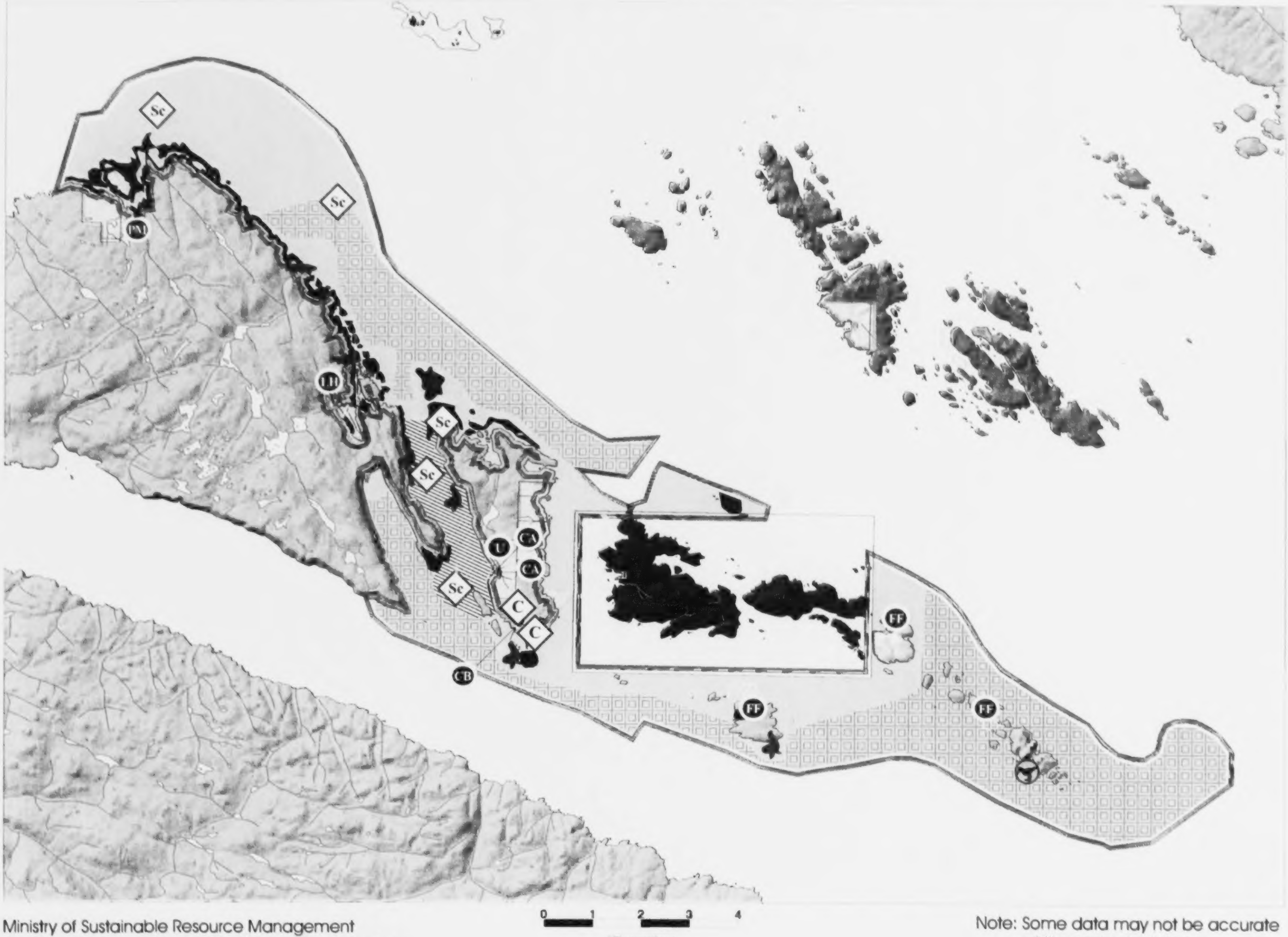
- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to conserve key marine biological values as a basis for compatible commercial recreation uses. The Browning Pass portion should be further assessed as a marine protection candidate.
- Place Browning Pass portion of unit under *Land Act* notation of interest in favour of WLAP for marine conservation and recreation purposes.
- Licences or permits for commercial recreation guiding use of this unit are conditional on operating practices that follow established guidelines and / or performance based standards for minimizing impacts on bird colonies and migratory bird habitat.
- Tenure provisions should be strengthened to minimize marine mammal and bird mortality at time of renewal.
- New tenures should not alienate recorded commercial dive fishery sites.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Opportunities should be maintained for beach use for commercial and public recreation.
- Finfish aquaculture tenure modification may be approved to accommodate anchoring requirements and/ or waste management regulation requirements, which include fallow sites.
- All applications for use within 1km of bird colonies should be referred to CWS.
- Conditional shellfish and marine plant aquaculture uses require submission of supporting biophysical information with license or lease application.

47 - Nigei Gordon Group (Conservation)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Note: Some data may not be accurate
at the scale depicted

Unit 48. Goletas Channel

Marine Area	13742 ha	**Shoreline**	91.4 km
Substrate	sand	**Slope**	sloping
Exposure	low (west) moderate (east) high (Bates Pass)	**Depth**	deep (mid-depth-Bates)
Current	low (high – Bates)	**Benthic Summer Temp**	cold
Roughness	low (west), moderate (east & Bates)		

Management Emphasis - General Marine

Description

The planning unit is characterized by a long, narrow passage with dispersed uses and activities.

Unit Attributes

- The western entrances to Goletas Channel, a marine area, and shoreline areas west of Duval Island, are significant for migratory birds (Bald Eagles, Harelquin Ducks, Marbled Murrelets, Phalaropes, gulls, Common Murres, Rhinoceros Auklets, scaup, Pacific Loon). These are CWS areas of interest.
- Red listed Round Tiny Inarticulate Discinisca Lamp Shell (globally unranked, provincially imperiled G?S2) found in bottom areas in Goletas Channel and south of Hope Island.
- Red listed Tiny White Black-spotted Chiton (globally unranked, provincially imperiled G?S2) found in the marine benthic area of unit near Cape James
- Kelp beds (13 identified –170 ha)
- Moderate to high invertebrate values
- Intertidal Clams : (2 beaches – 19 ha)
- Salmonid Streams: 13 observed, 11 assumed
- Marine mammal area (esp. Orca, porpoise) Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Estuary (17 ha)
- Seal haulout or rafting site (1 identified)
- Cape Scott Provincial Park on upland adjacent to Shushartie Bay.
- Northwest Trail projected to extend along Vancouver Island Coast to Cape Scott Park
- Shellfish capability not confirmed
- Finfish aquaculture potential: OA 1 (throughout)
- Tlatlasikwala and Kwakiutl traditional territories
- Indian Reserve – Hope Island
- Some private upland at Shushartie Bay

Current Uses & Activities

- First Nations: Shellfish, fishing and culturally significant areas along Hope and Nigei islands.
- Sport salmon (in vicinity of Duvall Point), ground fisheries
- Commercial salmon troll, gillnet, seine fisheries; hook & line, longline ground fisheries
- Scuba diving north of Shushartie Bay
- Remote campsites
- Marina at Duval Point Lodge
- Log handling & storage at Shushartie Bay
- Principle navigation route to Vancouver Island west coast through unit (CCG)

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- ✓ Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- ✓ Finfish
- O Marine Plant
- O Shellfish Beach
- O Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- ✓ General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

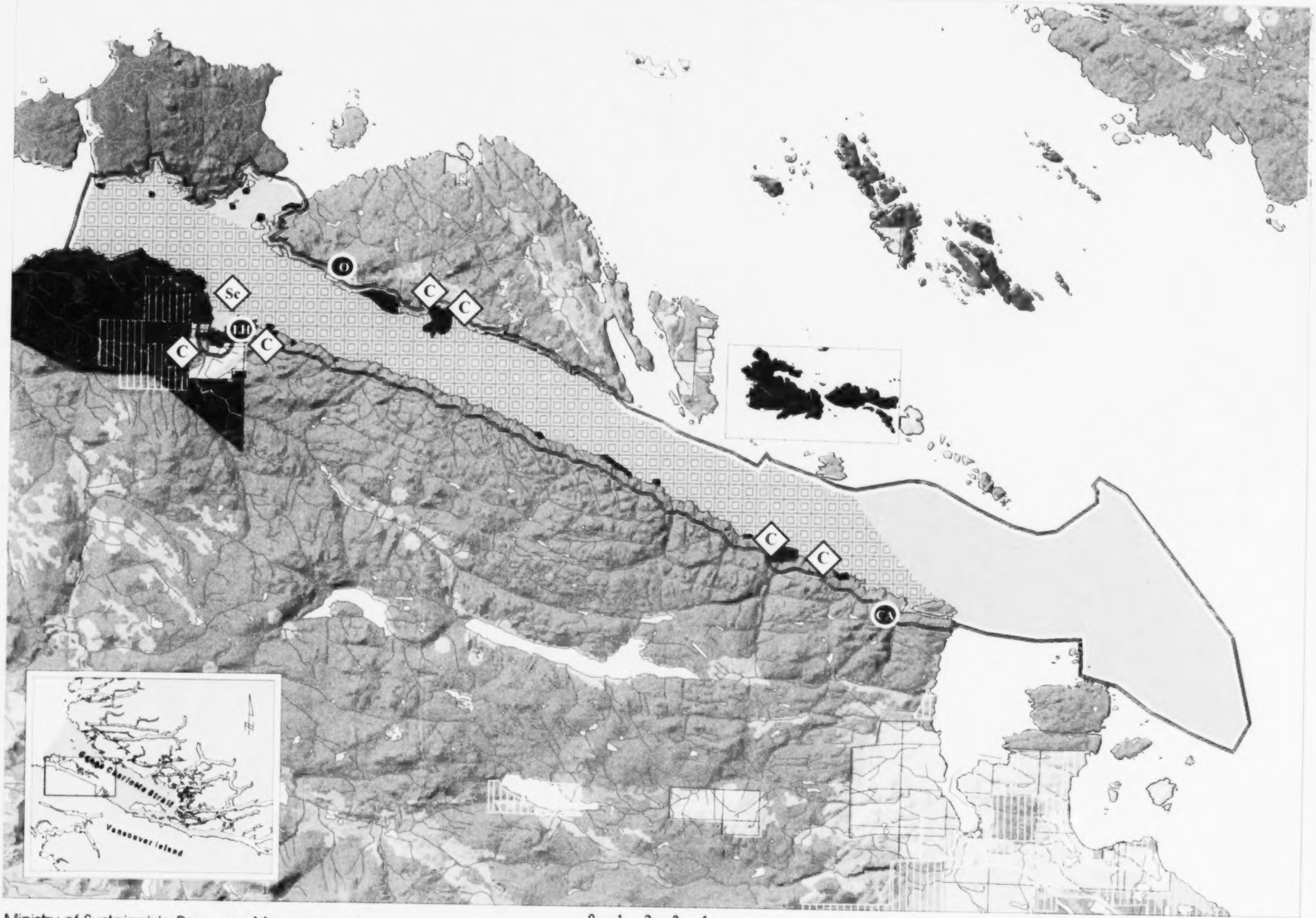
Code

✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain opportunities for existing uses while accommodating marine transportation requirements and fisheries.
- Tenures should be compatible with adjacent upland park and recreational management uses.
- New tenures and activities should minimize impact on seal/sea lion haulouts.
- New tenures should minimize interference with existing tourism development.
- New tenures should not alienate recorded commercial dive fishery sites.
- Opportunities should be maintained for beach use for commercial and public recreation.
- Commercial and industrial use applications within the unit should be referred to CWS.
- Conditional shellfish and marine plant aquaculture uses require submission of supporting biophysical information with license or lease application.

48 - Goletas Channel (General Marine)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Coast and Marine Planning/Decision Support Services

Kilometres
December 2002

Note: Some data may not be accurate at the scale depicted

Unit 49. Hope Island

Marine Area	8550 ha	**Shoreline**	69.8 km
Substrate	sand (hard – at Hope Is)	**Slope**	flat
Exposure	high	**Depth**	photic (shallow at Hope Is)
Current	low (high at east of unit)	**Benthic Summer Temp**	cold (warm at Hope)
Roughness	low		

Management Emphasis - Conservation

Description

This unit contains important conservation values including extensive kelp beds, rockfish habitat, red and blue-listed species habitat, and seal / sea lion haul outs.

Unit Attributes

- The area south of Hope Island to Vancouver Island, and an offshore area in Queen Charlotte Sound are significant for waterfowl and aquatic birds (Phalaropes, Rhinoceros Auklets, Marbled Murrelets, Scaup, gulls, Comon Murre, Scoters, Pacific Loons), these are CWS areas of interest.
- Red-listed species Tiny White Black-Spotted Chiton (G?S2), brown algae species *Dictyoneuropsis reticulata (*G4 S2*)*,and *Laminaria sinclairii* (G4S2*)*; have been identified in the subtidal zone of Roller Bay and Plover Island as well as in Goletas Channel
- The blue-listed Bog Rush is found in lowland areas adjacent to Hope Island foreshore.
- Kelp beds (91 identified – 895 ha)
- High rockfish values
- Moderate to high invertebrate values
- Sea lion haulouts(2 identified): The Northern Sealion is a red listed species (S2B, S3N)
- Non-native cultural features (2)
- Shellfish aquaculture capability not confirmed
- Finfish aquaculture potential: OA 1 (scattered)
- Tlatlasikwala traditional territory
- Hope Island is an Indian Reserve

Current Uses & Activities

- First Nations: Extensive fishing and cultural areas throughout. Some shellfish harvesting along southern channel of Hope Island
- Coast Guard station, community facilities and dock at Bull Harbour
- Sport salmon, ground fisheries
- Commercial salmon gillnet, seine fisheries; hook & line, longline fisheries
- Bate Passage used as secondary navigation route between Goletas Channel route and principle north-south coast route (CCG)

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- ✓ Marine Telecommunications & Utilities
- X Rural Development
- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- X General Commercial

Aquaculture:

- ✓ Finfish
- O Marine Plant
- O Shellfish Beach
- O Shellfish Deep Water Aquaculture

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

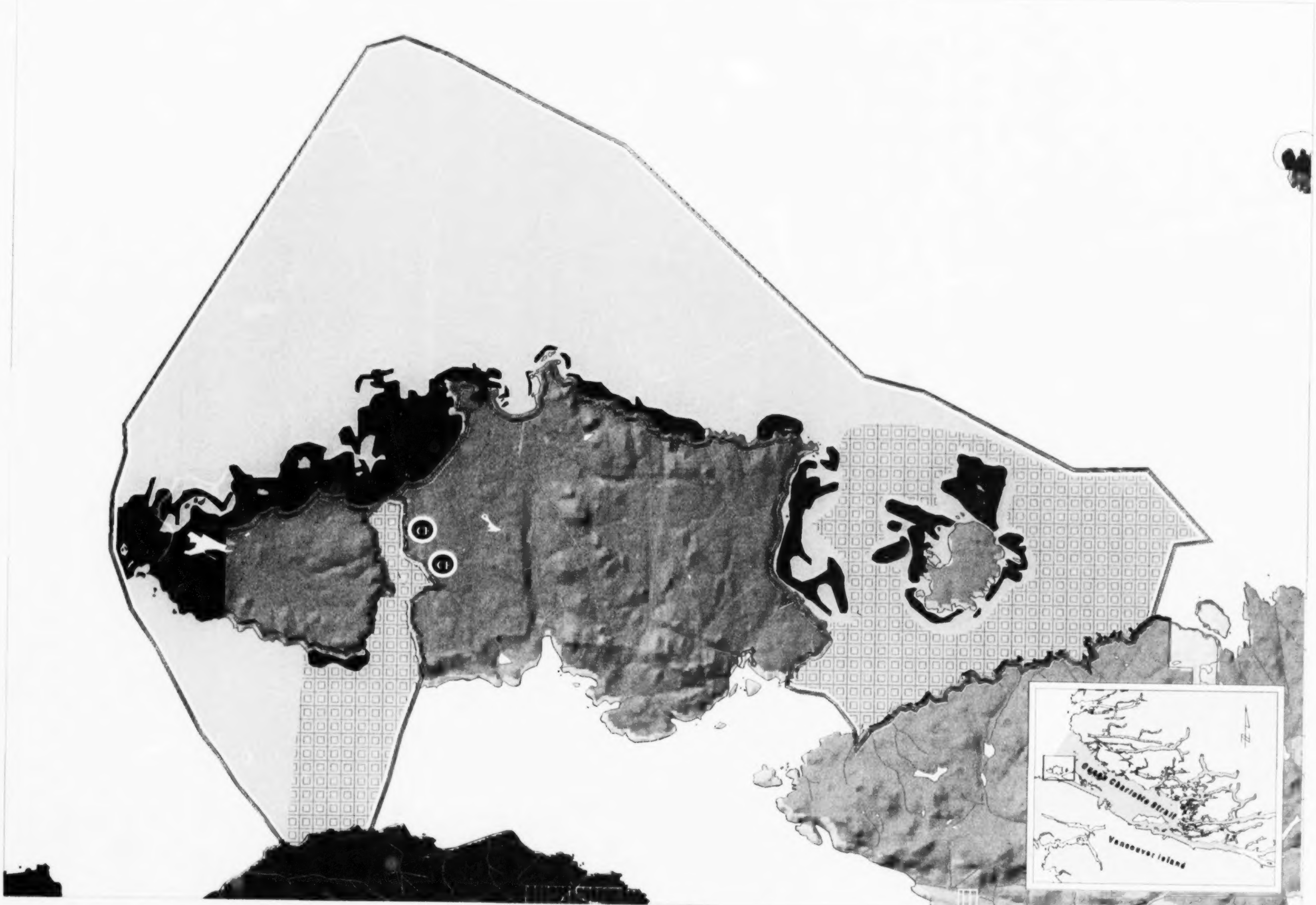
- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain conservation values while accommodating compatible uses.
- New tenures and activities should avoid disturbance of red and blue listed species sites in vicinity of Roller Bay and Ashby Point
- New tenures should not alienate recorded commercial dive fishery sites.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Commercial and industrial use applications within the unit should be referred to CWS.
- Conditional shellfish and marine plant aquaculture uses require submission of supporting biophysical information with license or lease application.

49 - Hope Island (Conservation)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December 2002

Note: Some data may not be accurate at the scale depicted

Unit 50. Polkinghorne

Marine Area	4736 ha	**Shoreline**	84.1 km
Substrate	sand	**Slope**	flat (0-5% slope)
Exposure	moderate	**Depth**	photic (20-50 m) to mid-depth (50-200m)
Current	low (<3 Kn)	**Benthic Summer Temp**	warm (9-15C)
Roughness	low		

Management Emphasis - Recreation

Description

This unit consists of shoreline entrances to Wells Passage and includes numerous island groups. Islands in the unit are popular for kayaking and recreational boating.

Unit Attributes

- Kelp beds throughout (2 identified – 10 ha total area)
- Eelgrass throughout Dickson & Percy Islands area (local knowledge)
- Intertidal Clams (17 beaches – 27 ha)
- Salmonid Streams: 4 observed, 3 assumed
- Adult salmon migration route, adult holding area
- Moderately important orca habitat: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Winter Humpback Whale resident area: provincially blue listed species
- Minke Whales in area (local knowledge)
- Moderate prawn values
- High rockfish values
- High to moderate invertebrate values
- Harbour Porpoise area: provincially blue-listed species
- Sea lion colony around Dickson & Percy Islands (local knowledge)
- Polkinghorne Islands and adjacent nearshore were proposed as Polkinghorne Goal 2 protection area by CCGAT in CCLRMP process; only upland now in CCLRMP terms of reference
- Finfish aquaculture potential: OA 1 (northern third)
- Good off bottom scallop capability (east of Dickson Island)
- Good beach clam and oyster aquaculture capability (Aimee Bay)
- Traditional territory of Tsawataineuk and Gwawaenuk
- Adjacent Indian Reserve - Kadis

Current Uses & Activities

- First Nations: Significant culturally sensitive areas around Dickson & Percy Islands. Extensive food fishery & shellfish beds areas throughout, including abalone. Concerned about overfishing in the area, whose food fishery is considered essential to cultural viability of Gwawaenuk.
- Remote campsites, popular kayak destination
- Boat haven at Dickson Island
- Sport salmon fishery
- Commercial hook & line ground fishery
- Local transport and navigation route through Wells Pass and mainland coast portion (CCG)

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- ✓ Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- ✓ Marine Plant
- ✓ Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

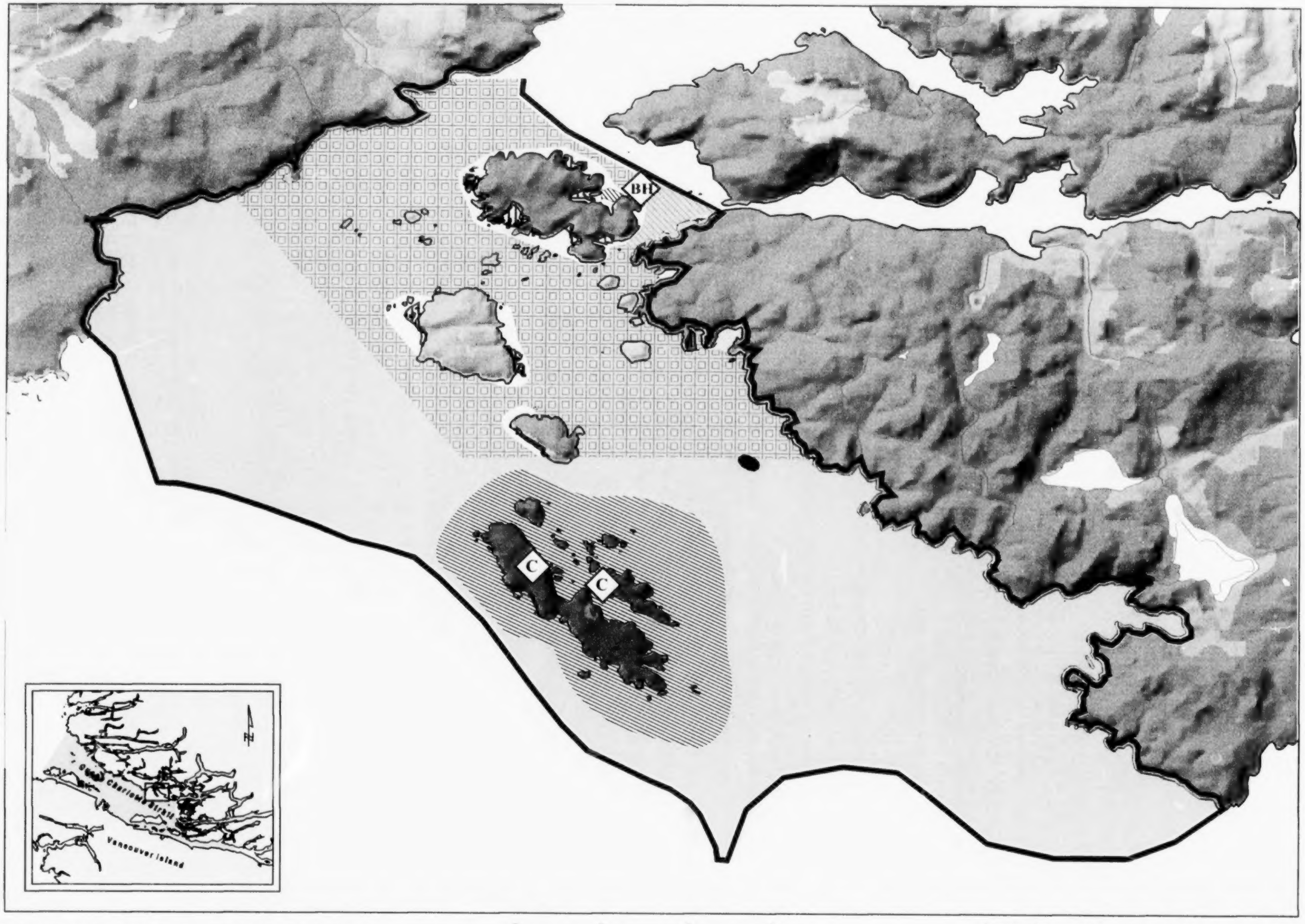
Code

✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain recreational opportunities while accommodating compatible development. The Polkinghorne component should be further assessed as a marine protection candidate.
- Place Polkinghorne portion of unit under *Land Act* notation of interest in favour of WLAP for marine conservation and recreation purposes.
- Establish *Land Act* notation of interest over Dickson Island boat haven.
- Tenures must be compatible with protection management regime if confirmed on adjacent upland.
- Tenure applicants are encouraged to develop working relationships with Gwawaenuk and Tsawataineuk First Nations, especially commercial recreation.
- New tenures should not alienate recorded commercial dive fishery sites.
- The regional district should address local recreational interests in its review of tenure referrals.
- Opportunities should be maintained for beach use for commercial and public recreation.
- Shellfish deepwater aquaculture tenures should not infringe on existing recreational, commercial and First Nations fisheries.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.

50 - Polkinghorne (Recreation)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December 2002

Note: Some data may not be accurate at the scale depicted

Unit 51. Blunden Harbour

Marine Area	2133 ha	**Shoreline**	59.9 km
Substrate	hard	**Slope**	flat (0-5% slope)
Exposure	moderate	**Depth**	photic (20-50 m) to mid-depth (50-200m)
Current	low (<3 Kn)	**Benthic Summer Temp**	warm (9-15C) to cold (<9C)
Roughness	low		

Management Emphasis - Conservation

Description

The unit is characterized by extensive kelp beds and clam beaches.

Unit Attributes

- The outer portions of Blunden Harbour are significant for migratory birds (scaup, diving ducks, Pacific Loon, Fork-tailed Storm Petrels). This is a CWS area of interest.
- Kelp beds (11 identified – 400 ha)
- Intertidal Clams (9 beaches – 130 ha)
- High rockfish values
- Moderate invertebrate values
- Historically high abalone areas (local knowledge)
- Major salmon migration route for mainland stream Coho (local knowledge)
- Salmonid Streams: 1 observed, 1 assumed
- Minke Whale summer feeding area
- Orca summer resting, winter feeding area: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Humpback Whale resident area: provincially blue listed species
- Finfish aquaculture potential: OA 1 (within 1 km of shore excluding Blunden Harbour)
- Medium oyster and clam beach aquaculture opportunity in Blunden Harbour (mainland to Robinson Island), good capability in Deer Cove
- Good scallop and oyster deep water aquaculture capability in Blunden Harbour (mainland to Robinson Island), Deer Coe, Bradley Lagoon
- Gwa'sala'Nakwaxda'xw traditional territory
- Adjacent Indian Reserve– Pahas
- Private upland east of Cohoe Bay

Current Uses & Activities

- First Nations: Extensive fishing, shellfish, and cultural areas throughout
- Major log transport and tie-up area between outer islands and mainland shore
- Local transport and navigation route along mainland coast (CCG)
- Boat haven at Blunden Harbour
- Salmon farm
- Other tenure
- Sport salmon fishery
- Commercial salmon troll fishery; hook & line ground fishery; crab fishery

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- • Finfish
- ✓ Marine Plant
- ✓ Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- X General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

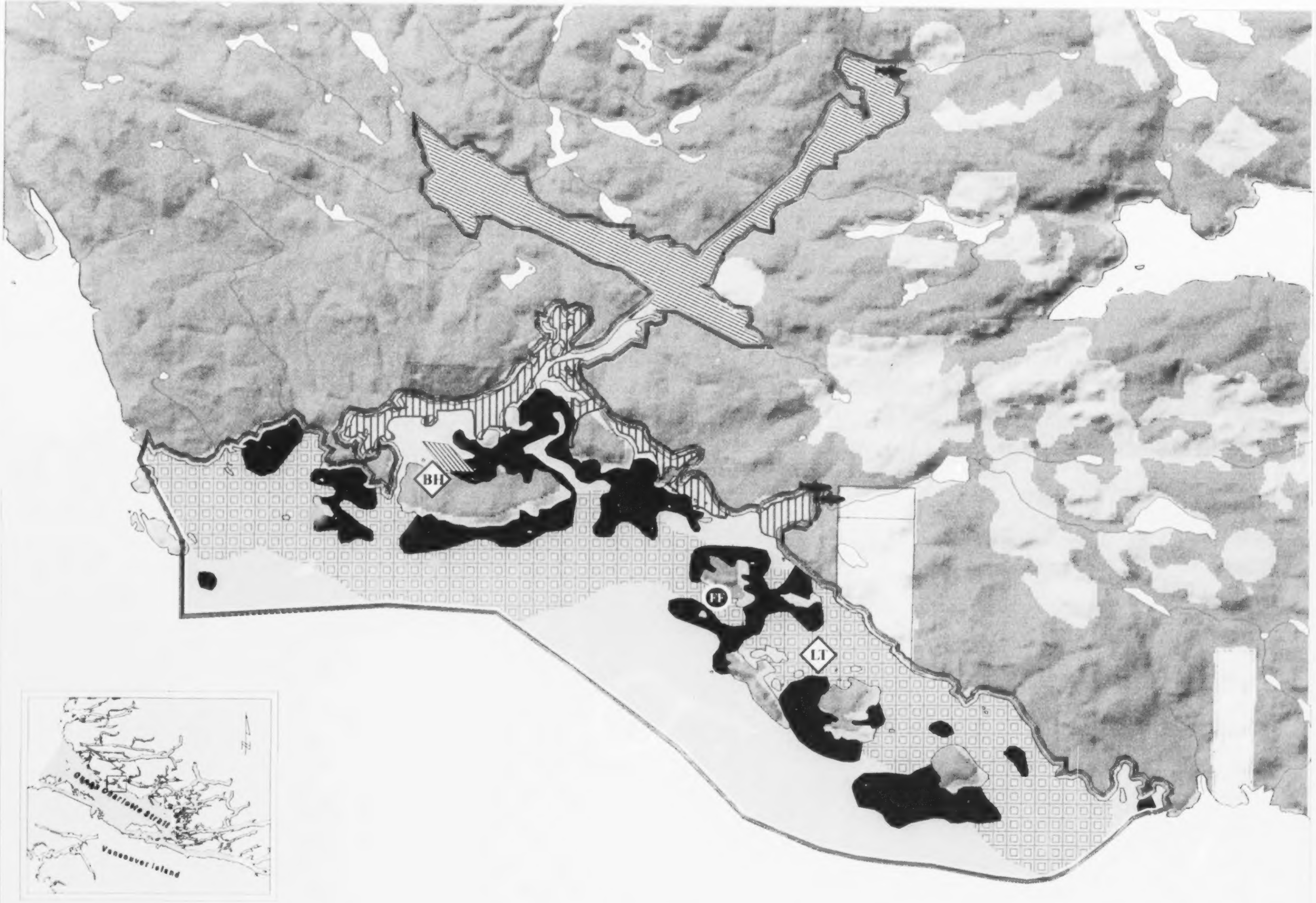
Code

✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain conservation values while accommodating existing levels of recreation and commercial development. The Bradley Lagoon portion of unit should be further assessed as a marine protection candidate.
- Place Bradley Lagoon under *Land Act* notation of interest in favour of CWS & WLAP for marine conservation and recreation purposes.
- Establish *Land Act* notation of interest over Blunden Harbour boat haven.
- No tenures should be issued in Bradley Lagoon.
- New tenures should not preclude opportunity for temporary log transport tie-up.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Finfish aquaculture tenure modification may be approved to accommodate anchoring requirements and/ or waste management regulation requirements, which include fallow sites.
- Commercial and industrial use applications outside of Bradley Lagoon should be referred to CWS.

51 - Blunden Harbour (Conservation)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Note: Some data may not be accurate
at the scale depicted

Unit 52. Shelter Bay

Marine Area	1940 ha	**Shoreline**	64.8 km
Substrate	hard	**Slope**	flat (0-5% slope)
Exposure	moderate	**Depth**	photic (20-50m)
Current	low (<3 Kn)	**Benthic Summer Temp**	warm (9-15C)
Roughness	low		

Management Emphasis – General Marine

Description

The unit contains rocky shoreline, sporadic kelp beds, and several salmon farms.

Unit Attributes

- Kelp beds (12 identified – 39 ha)
- Moderate invertebrate values
- Intertidal Clams: (4 beaches – 14 ha)
- Adult salmon holding areas, salmon migration route
- Salmonid Streams: 1 observed, 1 assumed
- High rockfish values
- Herring spawning: 5 spawns recorded
- No shellfish capability information available
- Finfish aquaculture potential: OA 1 (within 1 km of shore excluding Shelter Bay)
- Gwa'sala'Nakwaxda'xw traditional territory

Current Uses & Activities

- First Nations: shellfish areas along Richards Channel coastline with fishing concentrated around Jeanette Islands
- Salmon farms (3)
- Remote campsite
- Boat haven at Shelter Bay
- Sport salmon, ground fisheries
- Commercial salmon troll fishery; hook & line, longline ground fisheries
- Local navigation and transport route along mainland coast (CCG)

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

  - ✓ Finfish
  - X Marine Plant
  - X Shellfish Beach
  - X Shellfish Deep Water Aquaculture

- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Commercial Recreation:

  - ✓ Lodges and Base Camps
  - ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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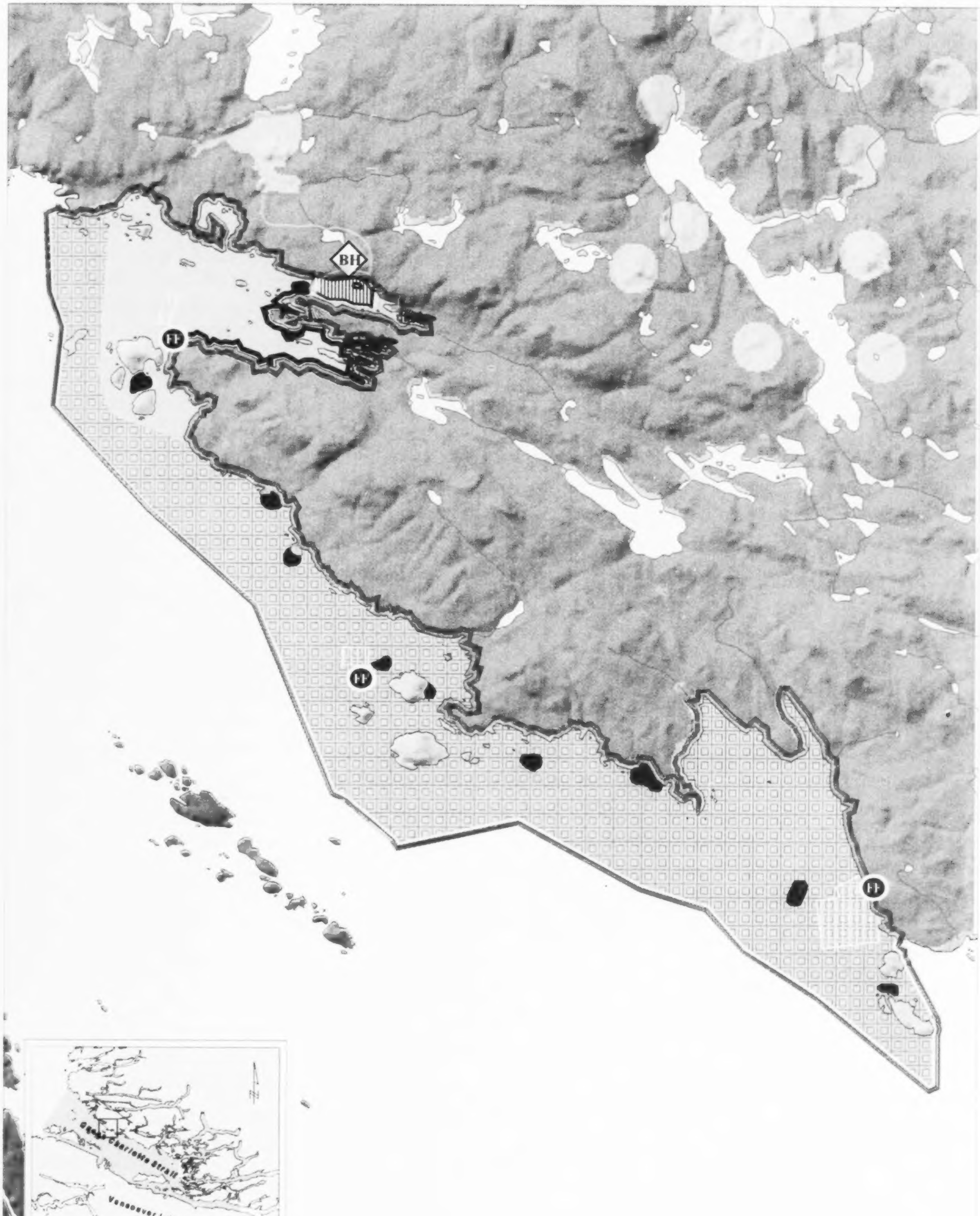
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain opportunities for finfish aquaculture while accommodating recreation uses and activities.
- Establish *Land Act* notation of interest over Shelter Bay boat haven.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- New tenures should not preclude opportunity for temporary log transport tie-up.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

52 - Shelter Bay (General Marine)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December 2002

Note: Some data may not be accurate at the scale depicted

Unit 53. Deserters and Walker Group

Marine Area	6602 ha	**Shoreline**	117.9 km
Substrate	hard	**Slope**	flat (0-5% slope)
Exposure	moderate	**Depth**	photic (20-50m) to mid-depth (50-200m)
Current	low (<3 Kn)	**Benthic Summer Temp**	cold (<9C) to warm (9-15C)
Roughness	high to low		

Management Emphasis - Conservation

Description

The unit comprises a series of islands and islets in Queen Charlotte Strait. It includes the Barry Islet and the Deserters and Walker island groups, both of which are proposed protection areas. The unit contains significant seal and sea lion haulouts, red and blue listed species, and provincially significant seabird habitat.

Unit Attributes

- CWS areas of interest: some islets in the Deserters Group, and the Millar Group are significant for migratory birds. Significant breeding colonies of Black Oyster Catcher and Glaucous-winged Gull are found on Deserters Island, Bleach Rock, Barry Islet, and Joan Island. The unit also has high value for red-listed marbled murrelets
- Millar Group is significant habitat for Northern Sea Lion (provincially red-listed)
- Barry Islet foreshore includes large communities of pink and white gorgonian corals
- The red listed (S1) algae *Hollenbergia Nigricans* has been identified in the Hedley Islands
- Kelp beds (5 identified – 30 ha)
- High rockfish values
- High to moderate invertebrate values
- Intertidal Clams (3 beaches identified– 15 ha)
- Seal haulouts, rafting sites
- Orca habitat: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Humpback and Grey Whale area: provincially blue listed species
- Dall's & Harbour Porpoise habitat: Harbour Porpoise is blue-listed provincially
- Islands in this unit and adjacent upland were proposed as Deserters-Walkers and Barry Islets Goal 2 protection areas by CCGAT in CCLRMP process; only upland now in CCLRMP terms of reference
- Finfish aquaculture potential: OA 1 (within island groups)
- No shellfish capability information available
- Gwa'sala Nakwaxda'xw traditional territory
- Private land ian Reserve– Mahpahkum
- Current Useswestern half of Staples Island

Current Uses & Activities

- First Nations: extensive fishing throughout. Shellfish harvesting around Deserters Group. Culturally significant areas around Walker Group
- Remote campsite
- Boat haven at Walker Group (under *Land Act* notation of interest)
- Salmon farm, application for a second farm under review
- Sport salmon, ground fisheries
- Commercial salmon troll , gillnet, seine fisheries; hook & line, longline ground fisheries

- Log tow and weather route through Shelter Pass (CCG)

Acceptable Uses & Activities

Tenured Uses

✓ Community & Public Institutional
X Light Industrial
O Marine Telecommunications & Utilities
X Rural Development

Aquaculture:

- • Finfish
- O Marine Plant
- O Shellfish Beach
- O Shellfish Deep Water Aquaculture

✓ Conservation
X Log Handling, Storage & Infrastructure
✓ Private Moorage
X General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- O Guiding Operations

Ongoing Non Tenured Activities

✓ Commercial Fisheries
✓ Marine Transportation
✓ First Nations
✓ Public Recreation

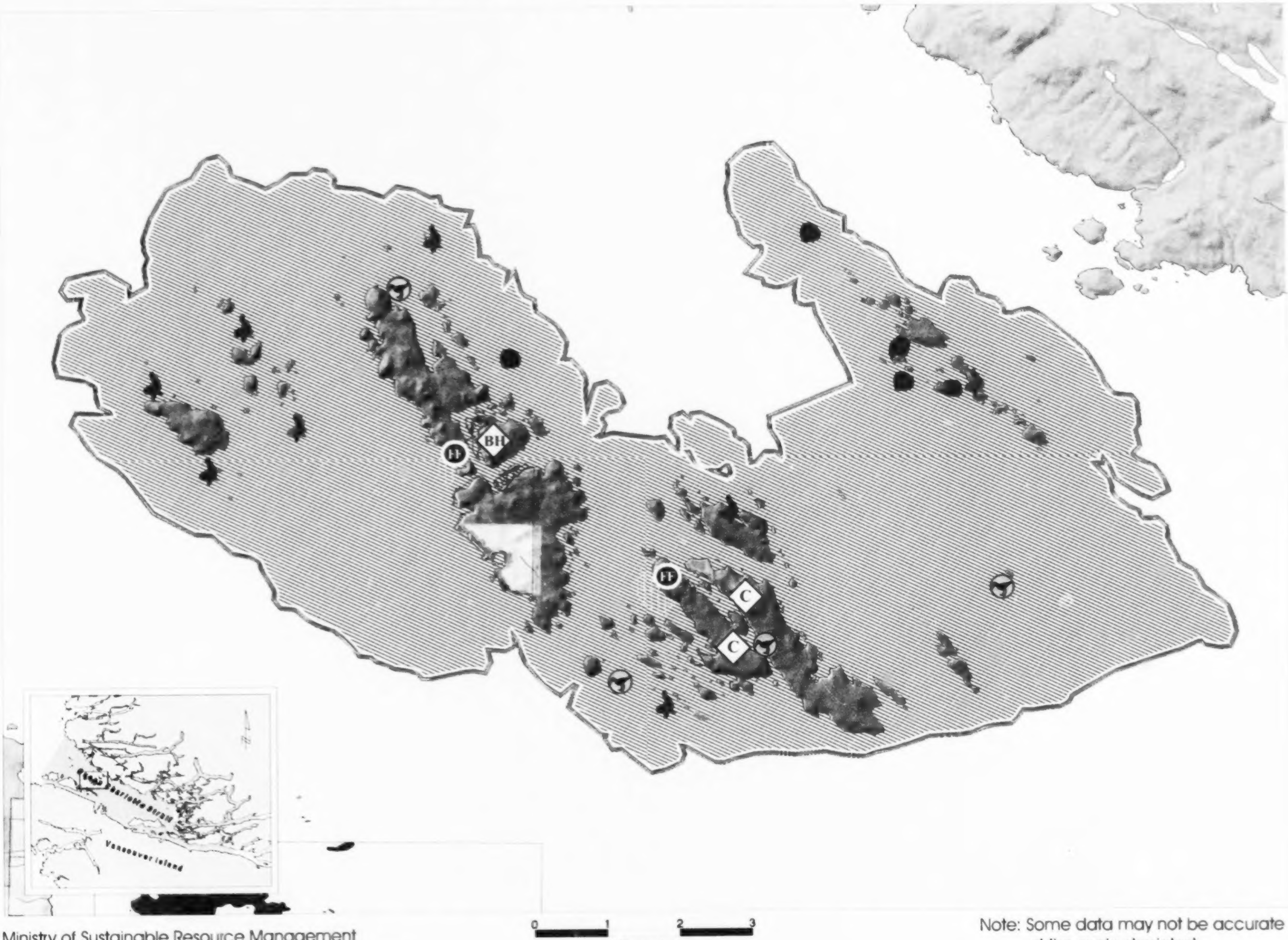
Code

✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain its conservation values, while accommodating limited additional development. The unit should be further assessed as a marine protection candidate.
- Place entire marine portion of unit under *Land Act* notation of interest in favour of CWS and WLAP for marine conservation and recreation purposes.
- Maintain *Land Act* notation of interest over Walker Group Boat haven.
- Tenures must be compatible with protection management regime if confirmed on adjacent upland.
- Tenures should be sited to minimize any negative impacts to Millar Group Sea lion haulouts.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Licences or permits for commercial recreation guiding use of this unit are conditional on operating practices that follow established guidelines and / or performance based standards for minimizing impacts on bird colonies and migratory bird habitat.
- Conditional shellfish and marine plant aquaculture uses require submission of supporting biophysical information with license or lease application.
- Finfish aquaculture tenure modification may be approved to accommodate anchoring requirements and/ or waste management regulation requirements, which include fallow sites.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

53 - Deserters and Walker Group (Conservation)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Coast and Marine Planning/Decision Support Services

December 2002

Note: Some data may not be accurate
at the scale depicted

Unit 54. Storm, Pine, Buckle

Marine Area	9237 ha	**Shoreline**	23.2 km
Substrate	hard	**Slope**	flat (0-5% slope)
Exposure	high	**Depth**	mid-depth (50-200m)
Current	low (<3 Kn)	**Benthic Summer Temp**	cool (<9C)
Roughness	moderate		

Management Emphasis - Conservation

Description

- This unit surrounds the Duke of Edinburgh Ecological Reserve covering several island groups and adjacent marine area. The unit area supports key seabird populations on the Central Coast and is the second most important seabird area in BC.

Unit Attributes

- CWS area of interest: unit contains important habitat for waterfowl and shorebirds (Black Oystercatcher and Glaucous-winged Gull breeding colonies, herring Gulls, cormorants, phalaropes)
- Red/Blue listed species: Bright Island, Herbert Island, Storm Island, Reid Islets and Tree Islets and adjacent marine waters are habitat for Cassins Auklet (blue listed S2S3)
- Kelp beds (18 identified – 193 ha)
- High rockfish values
- Moderate invertebrate values
- Moderate to High importance for Orcas: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed
- Important area for Dall's porpoises & Pacific White-sided Dolphins
- Sea lion haulout/ rafting site at East Tree Island: The Northern Sea lion is a red listed species
- The unit was proposed as Duke of Edinburgh Extension Goal 2 protection area by CCGAT in CCLRMP process; only upland now in CCLRMP terms of reference
- Historic/Cultural site - Pine Island Lighthouse
- Gwa'sala'Nakwaxda'xw traditional territory

Current Uses & Activities

- First Nations: No information provided
- Important marine transportation route
- Science measurement/research site
- Sport ground fishery
- Commercial salmon troll, gillnet, seine fisheries; hook & line, longline ground fisheries

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- O Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- First Nations
- ✓ Public Recreation

Code	
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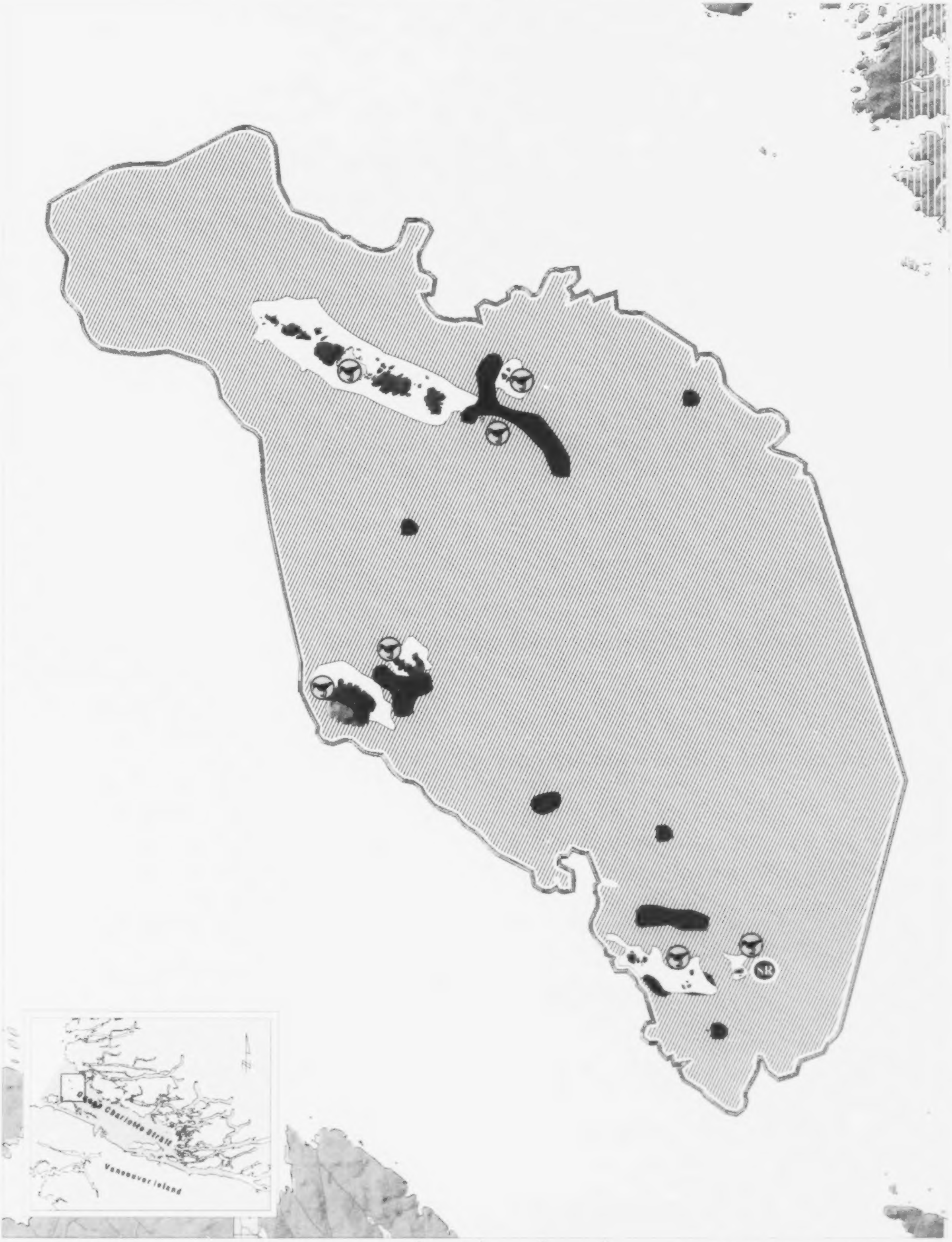
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain important conservation values. The entire unit should be further assessed as a marine protection candidate.
- Place entire unit under *Land Act* reserve in favour of CWS and WLAP for marine conservation and recreation purposes.
- Activities should be managed to prevent damage or disturbance of bird colonies.
- Licences or permits for commercial recreation guiding use of this unit are conditional on operating practices that follow established guidelines and / or performance based standards for minimizing impacts on bird colonies and migratory bird habitat.
- Tenures must be compatible with protection regime if confirmed on adjacent upland.
- Encourage involvement of Gwa'sala'Nakwaxda'xw in wildlife management activity.

54 - Storm-Pine-Buckle (Conservation)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December 2002

Note: Some data may not be accurate at the scale depicted

Unit 55. Cape Caution

Marine Area	8872 ha	**Shoreline**	239.6
Substrate	hard (sand to hard - Cape caution)	**Slope**	flat (0-5% slope)
Exposure	high	**Depth**	shallow (0-5m) to mid-depth (50-200m)
Current	low (<3 Kn)	**Benthic Summer Temp**	cool (<9C) to warm (9-15C)
Roughness	moderate to low (low – cape caution)		

Management Emphasis - Recreation

Description

Cape Caution is an important recreation destination. The unit lies on navigation routes to Seymour/Belize complex and to northern destinations.

Unit Attributes

- CWS areas of interest: several offshore islets and the area between Baccleugh and Bremner Points are significant for migratory birds (Black Oystercatcher, Glaucous-Winged Gull, Pigeon Guillemot); breeding colonies located at Annie Rocks, Harris and Rogers Islands, Emily Group and McEwan Rock. McEwan Rock is also a breeding colony for Pelagic Cormorants). These are habitat of the blue-listed Cassin's Auklet.
- Kelp beds (16 identified – 194 ha)
- Moderate invertebrate values
- Intertidal Clams (5 beaches – 22 ha)
- Sea lion haulouts: The Northern Sea lion is a red listed species
- Red-listed Artic Cookie Star has been identified in Slingsby Channel (Outer Narrows)
- Grey whale summer feeding area (blue listed species)
- High rockfish values
- Herring spawning (1 spawn recorded)
- This unit and adjacent upland areas were proposed as Cape Caution Goal 1 protection area by CCGAT in CCLRMP process; only upland now in CCLRMP terms of reference
- Upland areas recently established as temporary OIC protection areas until June 30, 2003
- Finfish aquaculture potential: OA 1 (within 1 km of shore excluding Allison Harbour)
- Good deepwater scallop, marine plant and oyster capability at Alison Harbour, Schooner Channel, Cougar Inlet, Treadwell Bay.
- Good deepwater oyster potential at Southgate Group.
- Medium deepwater scallop and marine plant potential in Southgate Group, Murray Labyrinth (entrance to Schooner Channel)
- Gwa'sala'Nakwaxda'xw Traditional Territory
- Adjacent Indian Reserve – Saagoombahlah
- Private land at Allison Harbour & north shore of Bramham Island

Current Uses & Activities

- First Nations: No information provided
- Major log transportation route through Slingsby Channel (CCG) and temporary tie-up area
- Light aircraft landings on beaches
- Boat havens at Miles Inlet (under *Land Act* Notation of Interest) and Treadwell Bay (under *Land Act* UREP Notation of Interest)

- Marine portion of unit established under *Land Act* UREP Notation of Interest in 1997
- Safe Anchorages at Allison Harbour and Southgate Group
- Scuba diving; swimming, beachcombing
- Kayaking destination, Remote campsites
- Guided nature viewing
- Year round commercial tenure
- General tenure
- Environment/Protection/Conservation reserves (2)
- Sport salmon fishery
- Commercial salmon troll fishery; hook & line, longline ground fisheries
- Log handling at Allison Harbour

Acceptable Uses & Activities

Tenured Uses

✓ Community & Public Institutional
X Light Industrial
O Marine Telecommunications & Utilities
X Rural Development

Aquaculture:

✓ Finfish
✓ Marine Plant
✓ Shellfish Beach
✓ Shellfish Deep Water Aquaculture

✓ Conservation
✓ Log Handling, Storage & Infrastructure
✓ Private Moorage
X General Commercial

Commercial Recreation:

X Lodges and Base Camps
O Guiding Operations

Ongoing Non Tenured Activities

✓ Commercial Fisheries
✓ Marine Transportation
✓ First Nations
✓ Public Recreation

Code

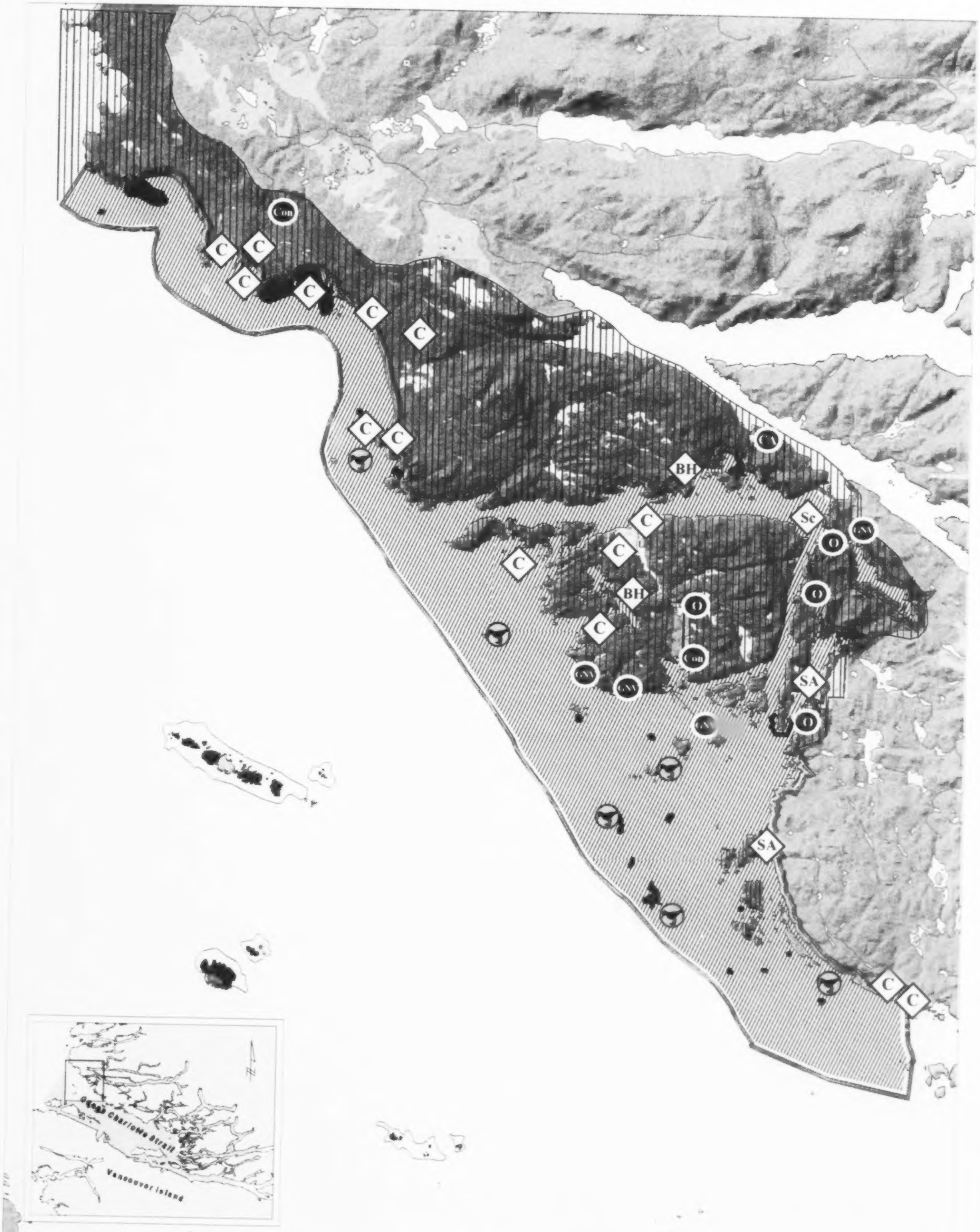
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed for recreation and uses that are compatible with management of the adjacent upland area. The marine portion should be further assessed as a marine protection candidate.
- Place entire unit (including Treadwell Bay boat haven) under *Land Act* notation of interest in favour of WLAP for marine conservation and recreation purposes.
- Maintain *Land Act* notation of interest over Miles Inlet boat haven.
- Activities and uses should be managed to minimize disturbance of red / blue listed species habitat.
- Licences or permits for commercial recreation guiding use of this unit are conditional on operating practices that follow established guidelines and / or performance based standards for minimizing impacts on bird colonies and migratory bird habitat.

- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- The regional district should address local recreational interests in its review of tenure referrals.
- All applications for use within 1km of bird colonies should be referred to CWS.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

55 - Cape Caution (Recreation)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Note: Some data may not be accurate at the scale depicted

Unit 56. Queen Charlotte Sound

Marine Area	39120 ha	**Shoreline**	2.5 km
Substrate	sand	**Slope**	flat (0-5% slope)
Exposure	high	**Depth**	mid-depth (50-200m)
Current	low (<3 Kn)	**Benthic Summer Temp**	cool (<9C)
Roughness	moderate – low		

Management Emphasis - General Marine

Description

This unit constitutes an exposed open water marine environment with limited shoreline.

Unit Attributes

- Two large offshore areas at the Sound's entrance are significant for migratory birds including the blue-listed Cassin's and the Rhinoceros Auklets. This unit supports the majority of the region's seabird populations, and is a CWS areas of interest (shearwaters, gulls, phalaropes, Common Murres).
- Kelp Beds (14 identified – 86 ha)
- High rockfish values
- No shellfish aquaculture capability information available
- Proposed off-shore exploration area – PetroCanada
- Gwa'sala'Nakwaxda'xw traditional territory

Current Uses & Activities

- First Nations: Fishing areas towards Hope Island
- Sport salmon, ground fisheries
- Commercial salmon gillnet, seine fisheries; hook & line, longline ground fisheries
- Marine-based wildlife viewing
- Scuba diving sites
- Principal, secondary and local transport and navigation routes through unit (CCG)

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- O Marine Plant
- O Shellfish Beach
- O Shellfish Deep Water Aquaculture

- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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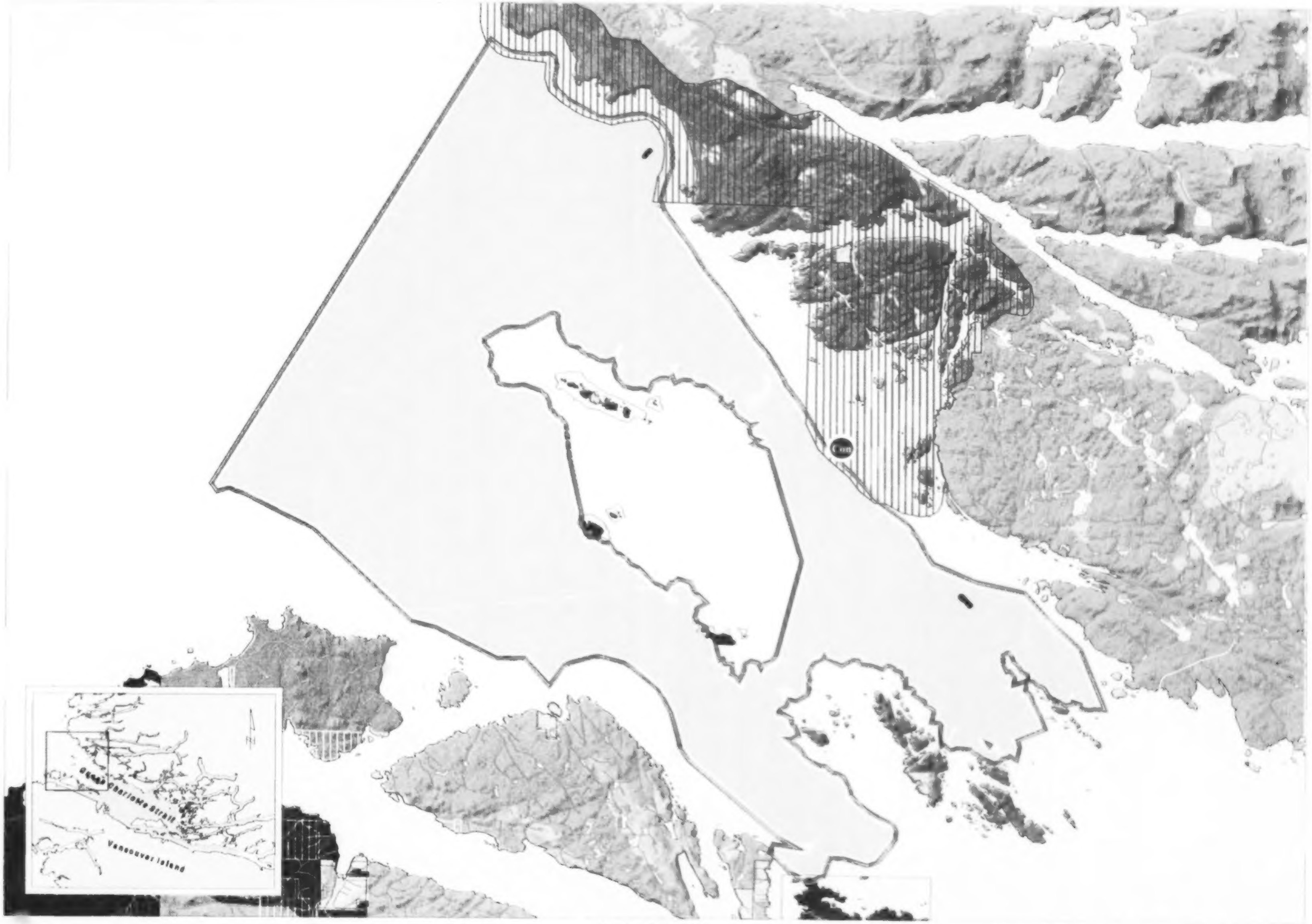
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain important biological and ecological values.
- Commercial and industrial use applications within the unit should be referred to CWS.
- Conditional shellfish and marine plant aquaculture uses require submission of supporting biophysical information with license or lease application.

56 - Queen Charlotte Sound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December 2002

Note: Some data may not be accurate
at the scale depicted

Unit 57. Numas Islands

Marine Area	4809 ha	**Shoreline**	14.8 km
Substrate	hard	**Slope**	flat (0-5% slope)
Exposure	moderate	**Depth**	mid-depth (50-200m)
Current	low (<3 Kn)	**Benthic Summer Temp**	cool (<9C)
Roughness	moderate – low		

Management Emphasis - Conservation

Description

The unit is comprises a small island group and surrounding waters in the Queen Charlotte Strait. It supports important bird colonies and marine mammal habitat.

Unit Attributes

- CWS area of interest: shoreline and nearshore areas are significant for migratory birds including the blue-listed Rhinoceros auklet; Staples Islet contains Black Oyster Catcher, Glaucous-winged Gull breeding colonies
- Blue listed Gmelin's Sedges located in saltmarshes; marine bottom areas in this unit are habitat of the red-listed Round Tiny Inarticulate Discinisca lamp Shell
- Moderate prawn values
- High rockfish values
- Moderate to high invertebrate values
- Industry assessing salmon aquaculture potential in area
- Important feeding area for Orcas: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Humpback Whale feeding area: provincially blue listed species
- Feeding area for Pacific White sided dolphins & Dalls porpoises
- Kelp beds throughout (2 identified – 30 ha total area)
- This unit and adjacent upland were proposed Numas Islands Goal 2 protection area by CCGAT in CCLRMP process; only upland now in CCLRMP terms of reference
- No shellfish aquaculture capability information available
- Traditional territory of Gwawaenuk and Kwakiutl First Nations

Current Uses & Activities

- First Nations: Important Gwawaenuk food collection area.
- Kayaking routes throughout
- Sport ground fishery
- Commercial salmon troll, gillnet, seine salmon fisheries; hook & line, longline ground fisheries
- Principle north-south transport route runs along outer edge of unit (CCG)

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development
- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

Commercial Recreation:

- X Lodges and Base Camps
- O Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
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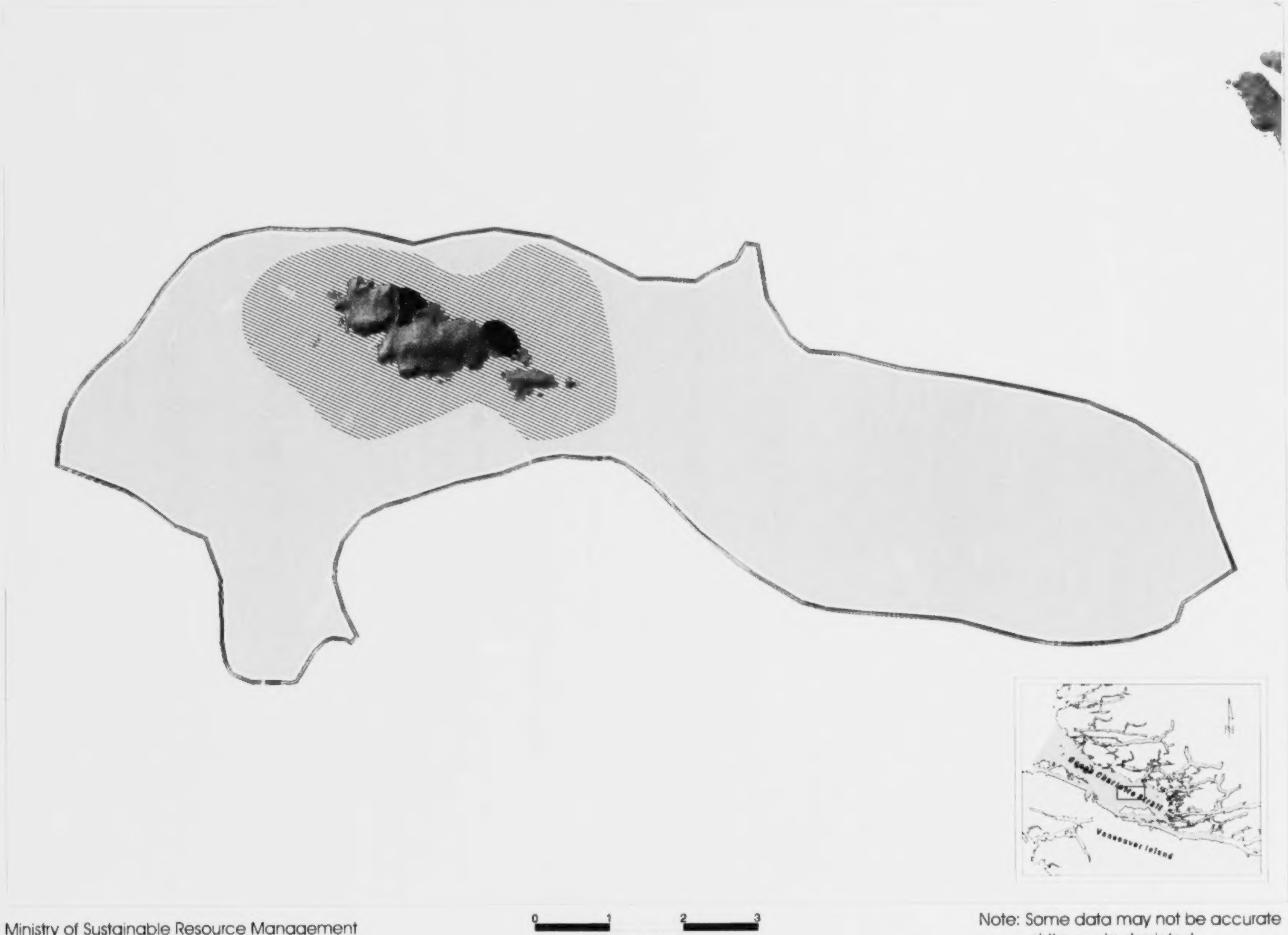
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain conservation values, while acknowledging continued exercising of First Nation food fishery, social and ceremonial rights. The Numas Islands portion of unit should be further assessed as a marine protection candidate.
- Place Numas Islands portion of unit under *Land Act* notation of interest in favour of CWS and WLAP for marine conservation and recreation purposes.
- Licences or permits for commercial recreation guiding use this unit are conditional on operating practices that follow established guidelines and / or performance based standards for minimizing impacts on bird colonies and migratory bird habitat.
- New tenures should not alienate recorded commercial dive fishery sites.

57 - Numas Island (Conservation)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Note: Some data may not be accurate at the scale depicted

Unit 58. Foster

Marine Area	2242 ha	**Shoreline**	8.2 km
Substrate	sand	**Slope**	flat (0-5%)
Exposure	moderate	**Depth**	mid-depth (50-200m)
Current	low (<3 Kn)	**Benthic Summer Temp**	cool (<9C)
Roughness	high		

Management Emphasis - Conservation

Description

This unit features three moderately exposed, small island groups with significant migratory bird populations and a seal lion haulout.

Unit Attributes

- CWS area of interest: Foster Island, Twin and Penfold Islets contain breeding colonies of Black Oyster Catcher, Glaucous-winged Gull, and Pigeon Guillemot
- Important area for Orcas: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Sea lion haulout on Penfold Islet: The Northern Sea lion is a red listed species
- High rockfish values
- Moderate to high invertebrate values
- Moderate prawn values
- No shellfish aquaculture capability information available
- Gwawaenuk traditional territory

Current Uses & Activities

- First Nations: Fishing through Georgia Passage with culturally significant areas around Foster and Holford Islands
- Kayaking routes throughout
- Limited commercial ground fishery and salmon fisheries
- Marine mammal viewing

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development
- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- X Private Moorage
- X General Commercial

Aquaculture:

- X Finfish
- O Marine Plant
- O Shellfish Beach
- O Shellfish Deep Water Aquaculture

Commercial Recreation:

- X Lodges and Base Camps
- O Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
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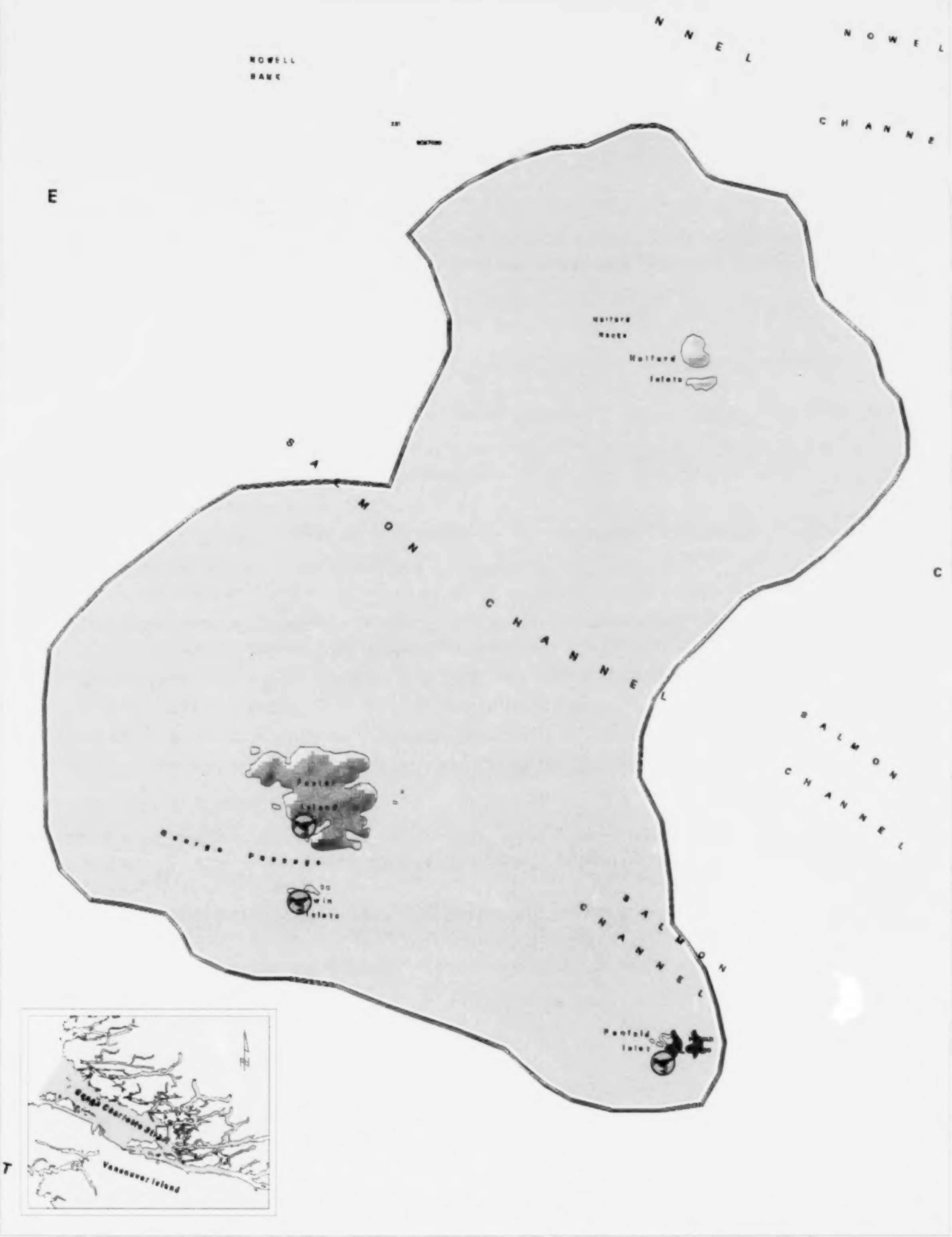
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain conservation values, while acknowledging continued exercise of First Nation food fishery, social and ceremonial rights.
- Licences or permits for commercial recreation guiding use of this unit are conditional on operating practices that follow established guidelines and / or performance based standards for minimizing impacts on bird colonies and migratory bird habitat.
- New tenures should not alienate recorded commercial dive fishery sites.
- All applications for use within 1km of bird colonies should be referred to CWS.
- Conditional shellfish and marine plant aquaculture uses require submission of supporting biophysical information with license or lease application.

58 - Foster (Conservation)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December 2002

Note: Some data may not be accurate at the scale depicted

Unit 59. Queen Charlotte Strait

Marine Area	81934 Ha	**Shoreline**	52.3 km
Substrate	sand	**Slope**	flat (0-5%)
Exposure	moderate	**Depth**	mid-depth (50-200m)
Current	low (<3 Kn)	**Benthic Summer Temp**	cool (<9C) to warm (9-15C)
Roughness	low		

Management Emphasis - General Marine

Description

This unit comprises marine waters of Queen Charlotte Strait. The area is moderately exposed and currents are generally low. Its eastern edge lies adjacent to the existing Broughton Archipelago provincial park.

Unit Attributes

- Important area for Orcas: Resident and West Coast transient populations are listed as threatened nationally (T), and imperiled provincially (S2). They are provincially red-listed.
- Minke summer feeding area (eastern extent of unit and south of Broughton Island)
- Kelp beds (28 identified – 71 ha)
- Moderate invertebrate values along mainland coast
- Intertidal clams (1 beach – 8 ha)
- Major salmon migration route along north mainland coast (especially Coho) (local knowledge)
- Moderate prawn values
- High rockfish values
- Upland areas in adjacent unit were proposed as Broughton Extension Goal 1 protection area by CCGAT in CCLRMP process; only upland now in CCLRMP terms of reference
- Adjacent upland areas recently established as temporary OIC protection areas until June 30, 2003
- Finfish aquaculture potential: OA 1 (within 1 km of north shore)
- No shellfish aquaculture capability information available
- Traditional territory of Gwa'sala'Nakwaxda'xw, Tsawataineuk, Namgis, and Kwakiutl First Nations

Current Uses & Activities

- First Nations: scattered shellfish harvesting. Fishing areas in Strait between Numas and Foster Islands as well as some areas North towards the Deserters Group. Several culturally sensitive areas along Foster and Holford Islands
- Commercial salmon troll, gillnet, seine, hook & line; urchin fishery; crab fishery; longline ground fishery
- Sport salmon, crab and ground fisheries
- Scuba diving
- Remote campsite
- Year-round recreational tenure
- Salmon farm
- Miscellaneous land use tenure
- Remote recreational residential tenure
- Major transport and navigation routes through unit, including principal north-south coast route, Vancouver Island west coast route and secondary routes (CCG)

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development

- ✓ Conservation
- X Log Handling, Storage & Infrastructure
- ✓ Private Moorage
- ✓ General Commercial

Aquaculture:

- ✓ Finfish
- O Marine Plant
- O Shellfish Beach
- O Shellfish Deep Water Aquaculture

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation

- ✓ First Nations
- ✓ Public Recreation

Code	
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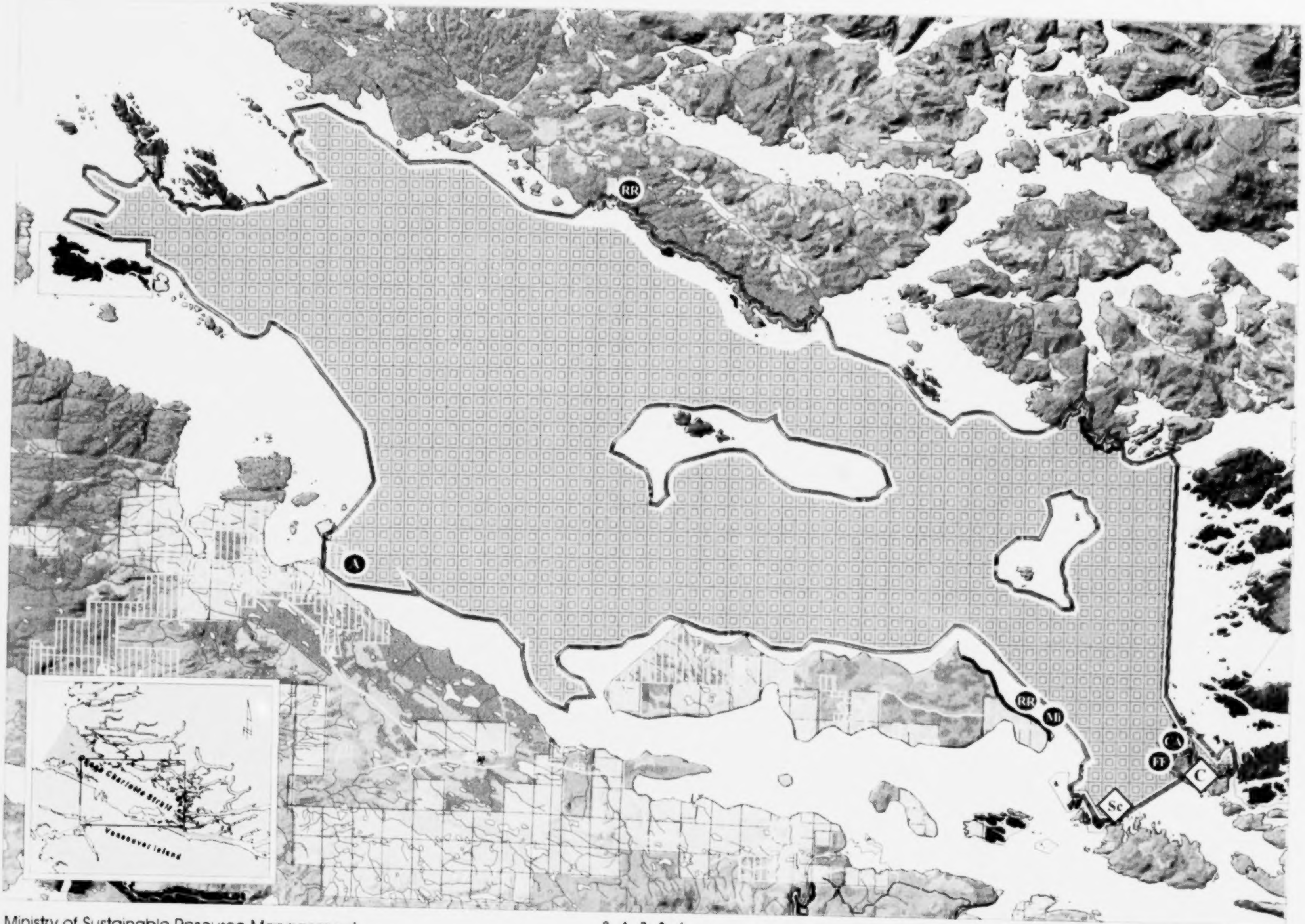
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate current uses and activities.
- New tenures for finfish aquaculture should be limited to the north shore of the unit.
- New tenures near Swanson Island should not interfere with seine fishery tie-ups along the shore.
- New tenures should be located and designed to minimize visual and aural effect on identified campsites.
- Conditional shellfish and marine plant aquaculture uses require submission of supporting biophysical information with license or lease application.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

59 - Queen Charllote Strait (General Marine)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Note: Some data may not be accurate at the scale depicted

Unit 60. Lassiter Seymour

Marine Area	2521 ha	**Shoreline**	45.2 km
Substrate	mud	**Slope**	sloping (5-20%)
Exposure	low	**Depth**	photic (20-50m)
Current	low (<3 Kn)	**Benthic Summer Temp**	warm (9-15C)
Roughness	low		

Management Emphasis - General Marine

Description

This unit is comprises narrow channels adjacent the Nakwakto tidal rapids. With currents of up to 16 knots, the rapids have some of the fastest tidal flows in the world. Currents elsewhere in the unit are low.

Unit Attributes

- Lassiter Bay and the entrance to Seymour-Belize are significant for Rhinoceros Auklets, and are CWS areas of interest.
- Kelp beds (13 identified – 176 ha)
- Intertidal Clams (3 beaches – 5 ha)
- Salmonid Streams: 11 observed, 6 assumed
- Limited (moderate) invertebrate values
- Herring spawning (1 spawn recorded)
- Upland areas in adjacent to unit were proposed as Cape Caution Goal 1 protection area by CCGAT in CCLRMP process; only upland now in CCLRMP terms of reference
- Adjacent Cape Caution upland areas recently established as temporary OIC protection areas until June 30, 2003
- Finfish aquaculture potential: OA 2 throughout, OA 1 (limited to western portion of unit)
- Medium deepwater oyster shellfish aquaculture potential Charlotte Bay
- Gwa'sala'Nakwaxda'xw traditional territory
- Indian Reserves – Dedagaus, Kequesta, Khazisela, Na-kwockto

Current Uses & Activities

- First Nations: Culturally sensitive areas throughout
- Commercial hook & line ground fisheries; prawn, crab fisheries
- Remote campsite
- Log handling & storage
- Other tenures (2)
- Environment/Protection/Conservation (1) – Rowley Bay

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- ✓ Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

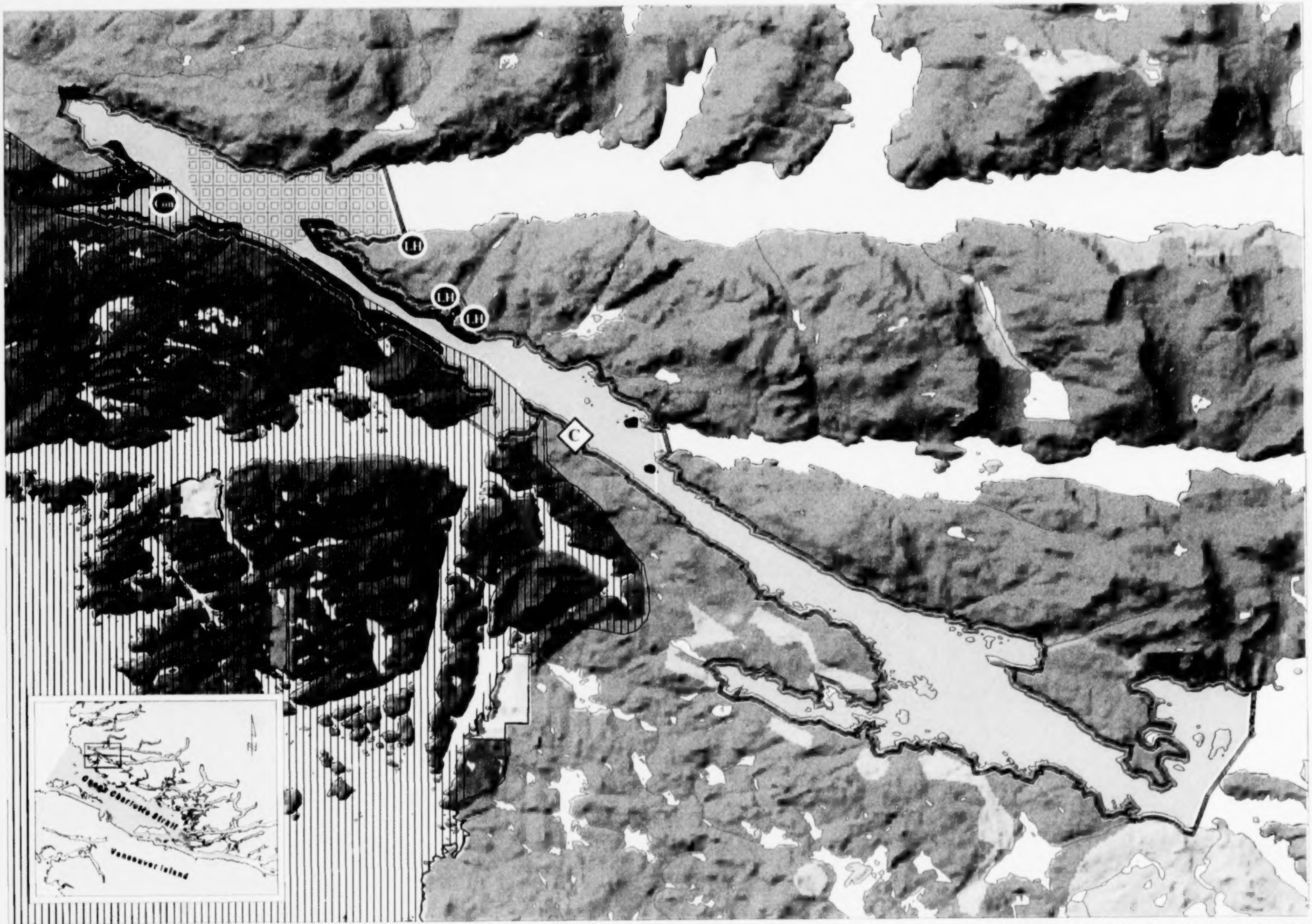
- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain existing activities.
- Tenures should be sited to minimize impact on kelp beds.
- Marine resource studies should be undertaken in this area.
- Commercial and industrial use applications within Lassiter Bay and the entrance to Seymour-Belize should be referred to CWS.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

60 - Lassiter-Seymour (General Marine)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Note: Some data may not be accurate at the scale depicted

Unit 61. Lower Nugent

Marine Area	293 ha	**Shoreline**	75.2 km
Substrate	sand	**Slope**	sloping (5-20%)
Exposure	low	**Depth**	photic (20-50m)
Current	low (<3 Kn)	**Benthic Summer Temp**	warm (9-15C)
Roughness	low		

Management Emphasis – General Marine

Description

This unit is a low current marine waterway with a number of existing log handling sites.

Unit Attributes

- Finfish aquaculture potential: OA 1 (excluding eastern extent)
- Moderate prawn values
- No shellfish aquaculture capability
- Gwa'sala'Nakwaxda'xw traditional territory
- Indian Reserve (1) – Kequesta

Current Uses & Activities

- First Nations: Fishing areas at entrance to Nugent Sound
- Log handling & storage
- Commercial hook & line ground fishery
- Commercial prawn fishery

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

  - X Finfish
  - X Marine Plant
  - X Shellfish Beach
  - X Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Commercial Recreation:

  - X Lodges and Base Camps
  - ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
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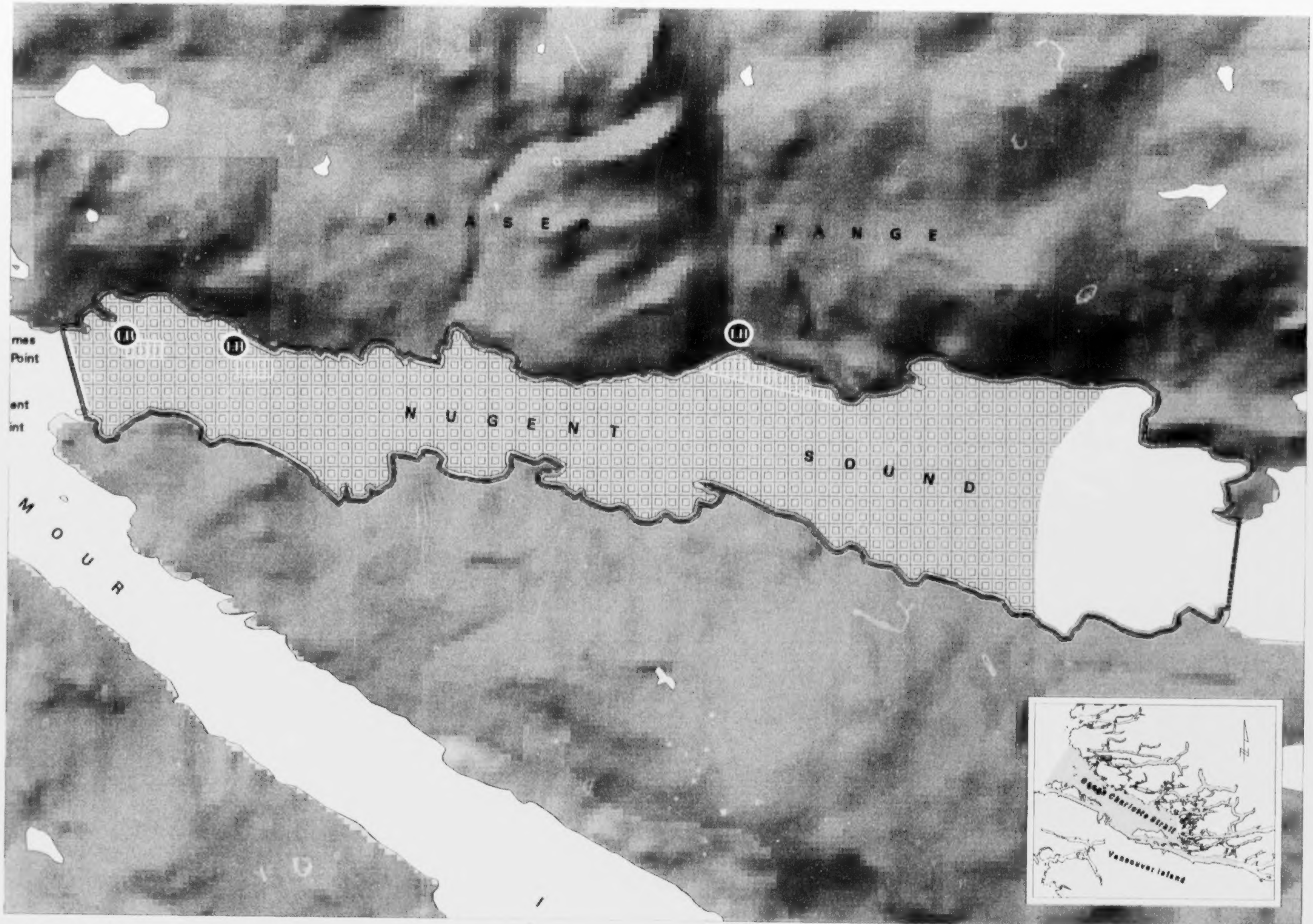
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate a mix of activities and uses.
- Marine resource studies should be undertaken in this area.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

61 - Lower Nugent (General Marine)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Unit 62. Upper Nugent

Marine Area	1251 ha	**Shoreline**	53.3 km
Substrate	mud	**Slope**	sloping (5-20%)
Exposure	low	**Depth**	mid-depth (50-200m)
Current	low (<3 Kn)	**Benthic Summer Temp**	warm (9-15C)
Roughness	low		

Management Emphasis - General Marine

Description

The area is characterized by steep walled fjords and very few beaches. The area has low currents and warm marine temperatures. It also has extensive herring spawn areas.

Unit Attributes

- Salmon streams: 5 observed, 4 assumed
- Moderate prawn values
- Herring spawn (23 spawns recorded)
- No shellfish aquaculture capability
- Finfish aquaculture opportunity rated as poor-not recommended
- Gwa'sala'Nakwaxda'xw traditional territory

Current Uses & Activities

- First Nations: small fishing area at entrance of upper sound
- Log handling and storage
- Commercial prawn fishery

Acceptable Uses & Activities

Tenured Uses

X Community & Public Institutional
X Light Industrial
O Marine Telecommunications & Utilities
X Rural Development

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

✓ Conservation
✓ Log Handling, Storage & Infrastructure
X Private Moorage
✓ General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

✓ Commercial Fisheries
✓ Marine Transportation
✓ First Nations
✓ Public Recreation

Code	
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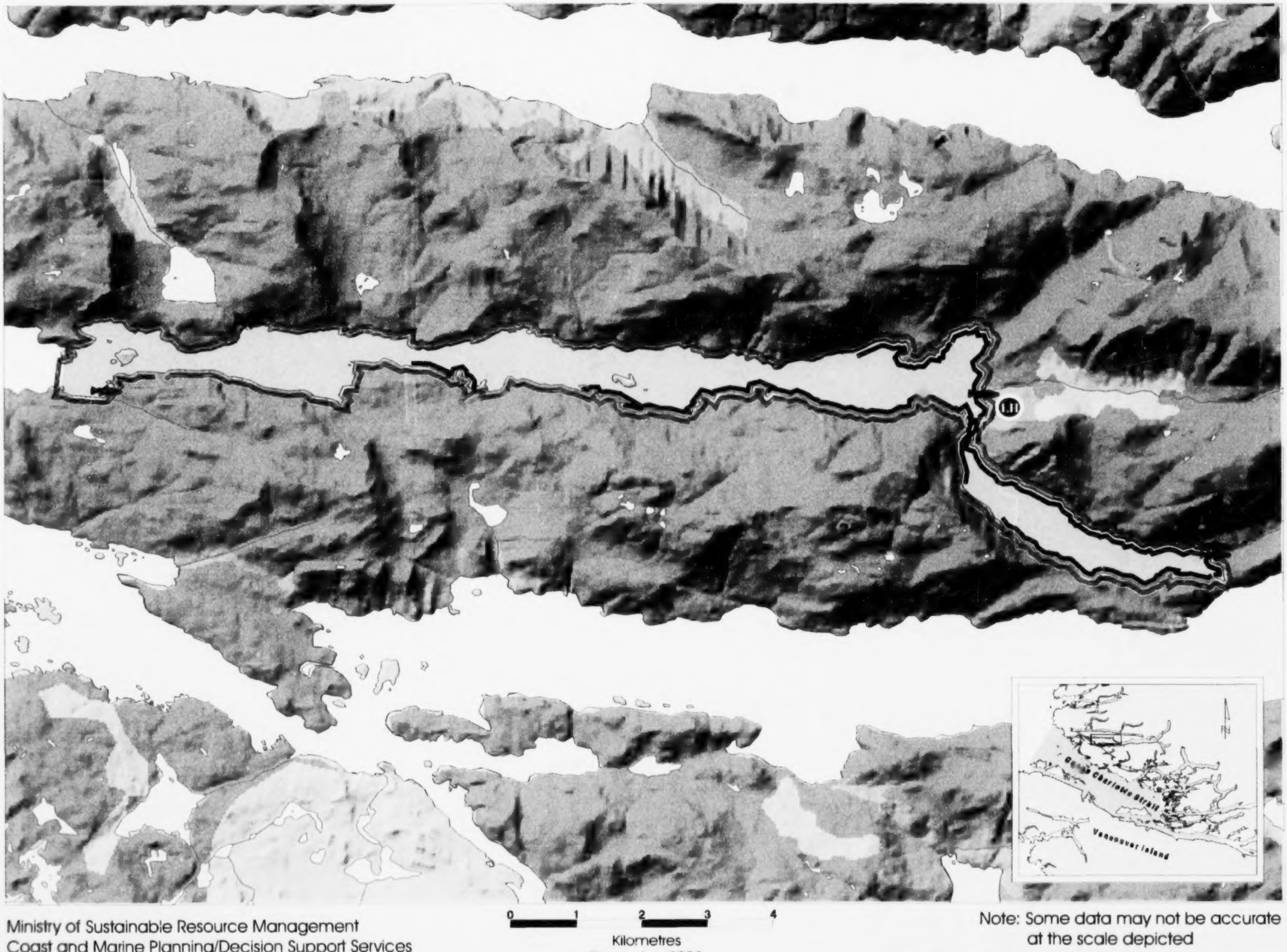
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate a mix of activities and uses.
- Marine resource inventories should be undertaken in this area.
- Log handling tenures should be sited and managed to minimize impact on herring spawn.
- New tenures should not alienate recorded commercial dive fishery sites.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

62 - Upper Nugent (General Marine)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Note: Some data may not be accurate at the scale depicted

Unit 63. Belize

Marine Area	7383 ha	**Shoreline**	184.6 km
Substrate	mud	**Slope**	sloping (5-20%)
Exposure	low	**Depth**	deep (200-1000m)
Current	low (<3 Kn)	**Benthic Summer Temp**	cool (<9C)
Roughness	low		

Management Emphasis – General Marine

Description

The unit is a steep-walled fjord with low current. It contains a number of log handling sites.

Unit Attributes

- Belize Inlet is significant for Rhinoceros Auklets and is a CWS area of interest.
- Kelp beds (1 identified – 2 ha total area)
- Salmonid Streams: 12 observed, 8 assumed
- Major salmon rearing area (local knowledge)
- Seal haulout or rafting site (1 identified)
- Finfish aquaculture potential: OA 1 (along Belize west of Allison Sound); OA 2 (Mereworth Sound)
- No shellfish aquaculture capability
- Gwa'sala'Nakwaxda'xw traditional territory
- Indian Reserve (1) – Tsai-Kwi-Ee

Current Uses & Activities

- First Nations: No information provided
- Log handling & storage
- Other tenure
- Boat haven at Strachan Bay (under *Land Act* notation of interest).
- Sport prawn,crab, shrimp fisheries; ground fishery
- Commercial prawn, crab, shrimp fisheries; ground fishery

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

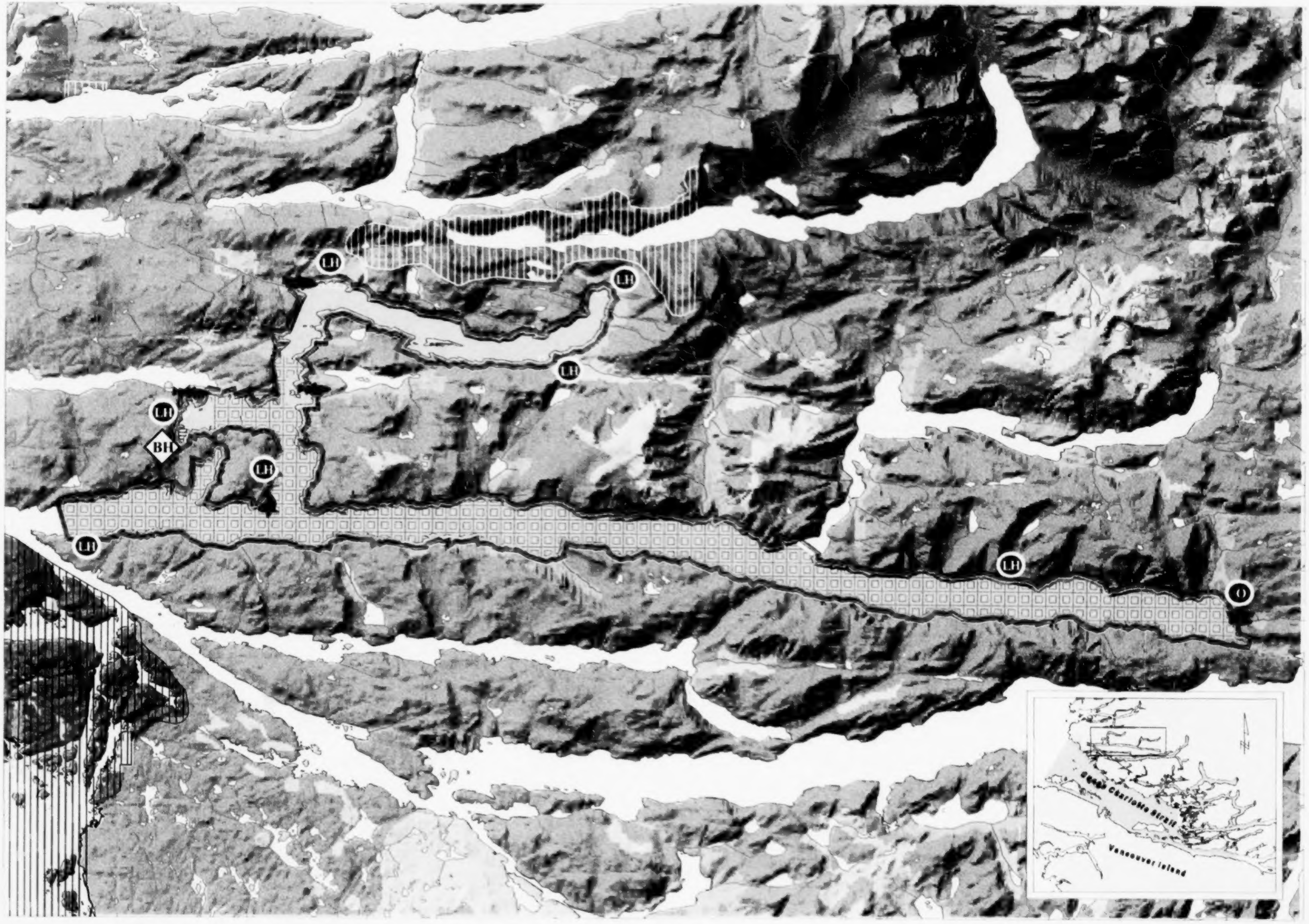
- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code	
✓	The use or activity is considered acceptable and appropriate. Applications for tenure of this use should be accepted for processing and evaluation.
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate mixed activities and uses.
- Maintain *Land Act* notation of interest over Strachan Bay boat haven.
- Commercial and industrial use applications within Belize Inlet should be referred to CWS.

63 - Belize (General Marine)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Note: Some data may not be accurate
at the scale depicted

Unit 64. Alison

Marine Area	1515 ha	**Shoreline**	58.4 km
Substrate	mud	**Slope**	sloping (5-20%)
Exposure	low	**Depth**	deep (200-1000m)
Current	low (<3 Kn)	**Benthic Summer Temp**	cool (<9C)
Roughness	low		

Management Emphasis - Recreation

Description

- The unit is a low current, fjord inlet with Waump and Alison estuaries at its upper reaches.

Unit Attributes

- Salmonid Streams: 14 observed, 12 assumed
- No shellfish aquaculture capability
- Finfish aquaculture opportunity rated as poor-insufficient information and not recommended
- Forest industry has identified a potential heli-log drop site in Peet Bay
- Gwa'sala'Nakwaxda'xw traditional territory
- Indian Reserves (4) – Kai-Too-Kwis, ko-Kwi-Iss, Per-Looth'l Kai, Waump

Current Uses & Activities

- First nations: No information provided
- Secondary boating route
- Boat haven at Peet Bay (under *Land Act* notation of interest).
- Log handling & storage
- Other tenure
- Bear viewing in estuary
- Sport prawn & shrimp & crab fisheries
- Commercial prawn, shrimp & crab fishery; ground fisheries

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Commercial Recreation:

- ✓ Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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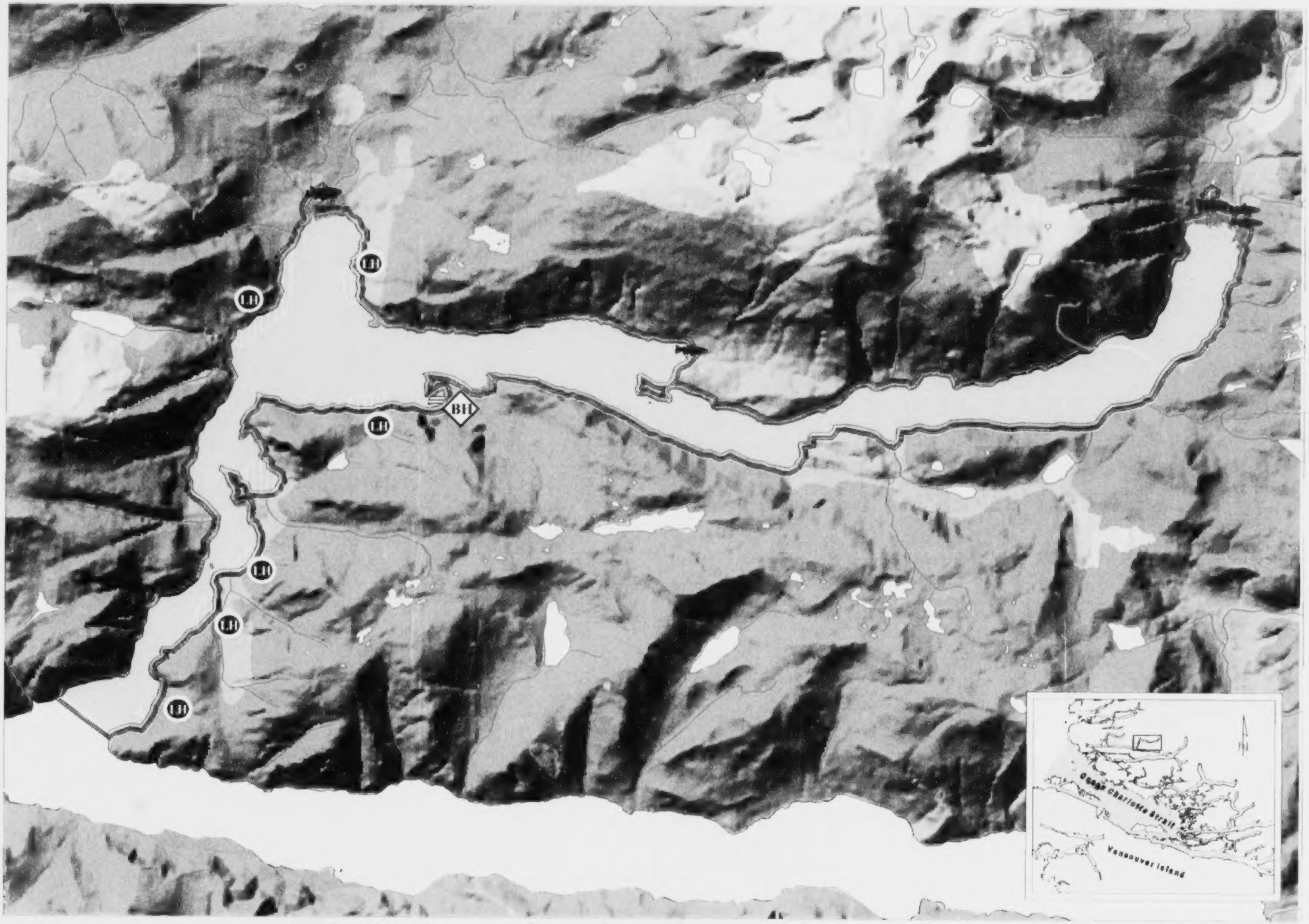
o	The use is considered conditionally acceptable. Applications for tenure for use require more specific information on capability and potential to accompany a tenure application before it is accepted for processing.
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to support recreational use while minimizing conflict with log handling and storage.
- Maintain *Land Act* notation of interest over Peet Bay boat haven.
- Log handling on adjacent shoreline should minimize visual impact for recreation.
- New tenures should minimize impact on estuaries and associated values.
- The regional district should address local recreational interests in its review of tenure referrals.

64 - Alison (Recreation)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Unit 65. Seymour

Marine Area	11419 ha	**Shoreline**	240.7 km
Substrate	mud	**Slope**	sloping (5-20%)
Exposure	low	**Depth**	deep (200-1000m)
Current	low (<3 Kn)	**Benthic Summer Temp**	cool (<9C) to warm (9-15C)
Roughness	low		

Management Emphasis – General Marine

Description

The unit is a narrow fjord inlet with low currents.

Unit Attributes

- Woods Lagoon, the area to the south of Brew Peninsula and the lower half of Frederick Arm are significant for Goldeneyes and gulls, and are CWS areas of interest.
- Herring spawning: (12 spawns recorded)
- Salmonid streams: 21 observed, 33 assumed
- Seal haulout site
- No sellfish aquaculture capability
- Finfish aquaculture potential: OA 2 throughout
- Gwa'sala'Nakwaxda'xw traditional territory
- Indian Reserves (3) – Kutjlo, Owh-Wis-Too-A-Wan, Peneece

Current Uses & Activities

- First Nations: No information provided
- Remote campsite
- Sport prawn & shrimp fisheries
- Commercial prawn & shrimp fisheries; ground fishery
- Log handling & storage sites, logging camp
- Year-round commercial tenure

Acceptable Uses & Activities

Tenured Uses

- X Community & Public Institutional
- X Light Industrial
- O Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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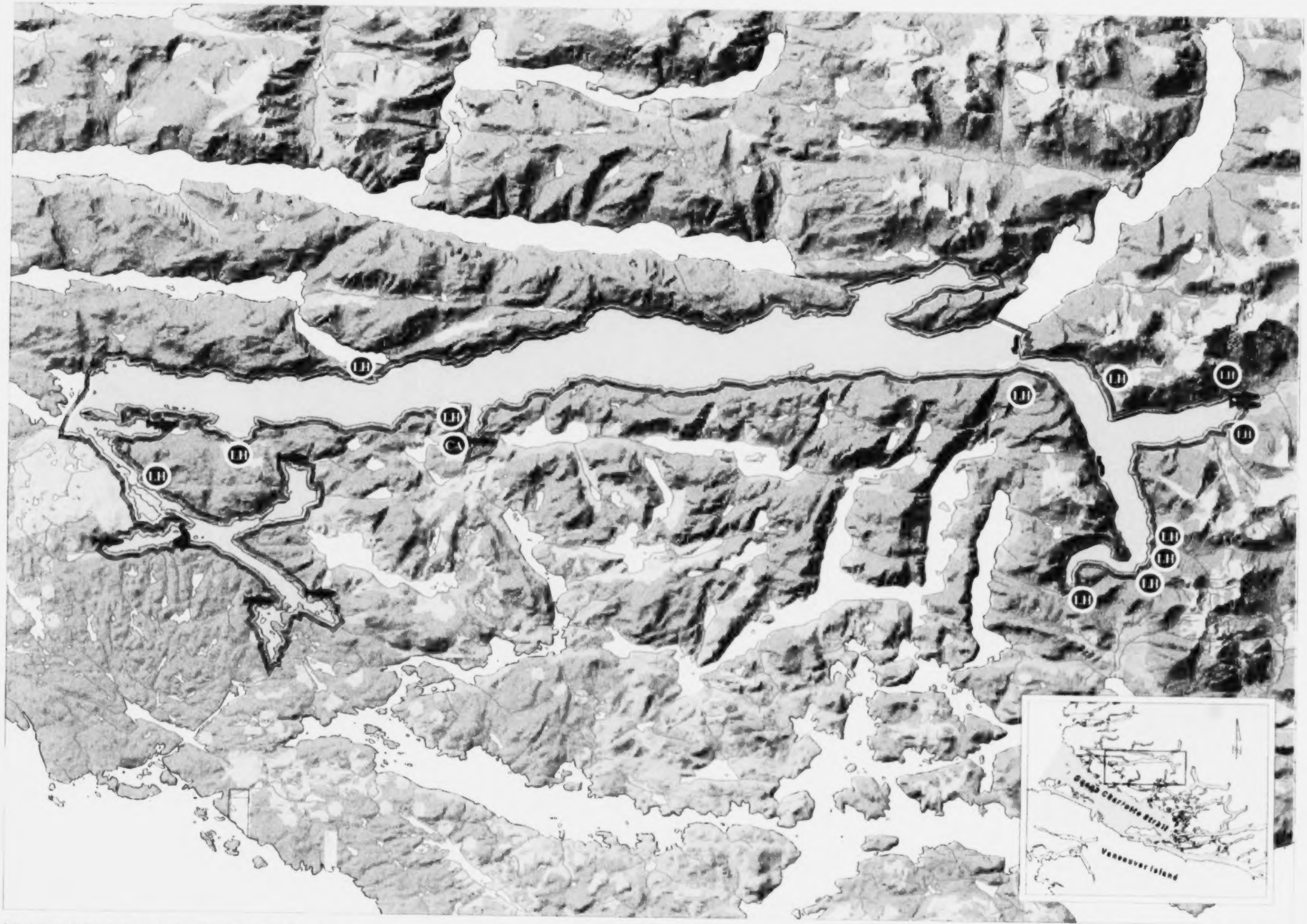
•	The use is acceptable at existing levels of tenure, subject to limited modifications as required by government. Applications for new tenures should not be accepted. Abandoned or unutilized sites should not subsequently be made available for the same use.
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to maintain current uses and activities.
- Commercial and industrial use applications within Woods Lagoon, the area south of Brew Peninsula, and the lower Frederick Arm should be referred to CWS.
- Conditional marine telecommunications/ utilities uses require submission of supporting biophysical information with license or lease application.

65 - Seymour (General Marine)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Note: Some data may not be accurate at the scale depicted

Unit 66. Seymour Estuary

Marine Area	2616 ha	**Shoreline**	46.0 km
Substrate	sand	**Depth**	photic
Exposure	low	**Benthic Summer Temp**	warm
Current	low	**Roughness**	low
Slope	flat		

Management Emphasis – General Marine

Description

This unit is a low-current inlet leading to but excluding the Seymour River estuary. The unit supports a considerable amount of log handling activity and experiences seasonal recreational use.

Unit Attributes

- The northwest half of the unit is significant for Golden Eyes and gulls and is a CWS area of interest.
- Estuary and adjacent upland areas were proposed as Goal 2 protection area (Seymour Estuary) by CCGAT in CCLRMP process; estuary being addressed in CCLRMP
- Cultural values and archaeological site.
- No shellfish aquaculture capability
- Finfish aquaculture capability not rated-no information
- Gwa'sala Nakwaxda'xw traditional territory.

Current Uses & Activities

- First Nations: No information provided
- Bear viewing
- Remote campsite
- Log handling & storage

Acceptable Uses & Activities

Tenured Uses

- ✓ Community & Public Institutional
- X Light Industrial
- X Marine Telecommunications & Utilities
- X Rural Development

Aquaculture:

- X Finfish
- X Marine Plant
- X Shellfish Beach
- X Shellfish Deep Water Aquaculture

- ✓ Conservation
- ✓ Log Handling, Storage & Infrastructure
- X Private Moorage
- ✓ General Commercial

Commercial Recreation:

- X Lodges and Base Camps
- ✓ Guiding Operations

Ongoing Non Tenured Activities

- ✓ Commercial Fisheries
- ✓ Marine Transportation
- ✓ First Nations
- ✓ Public Recreation

Code

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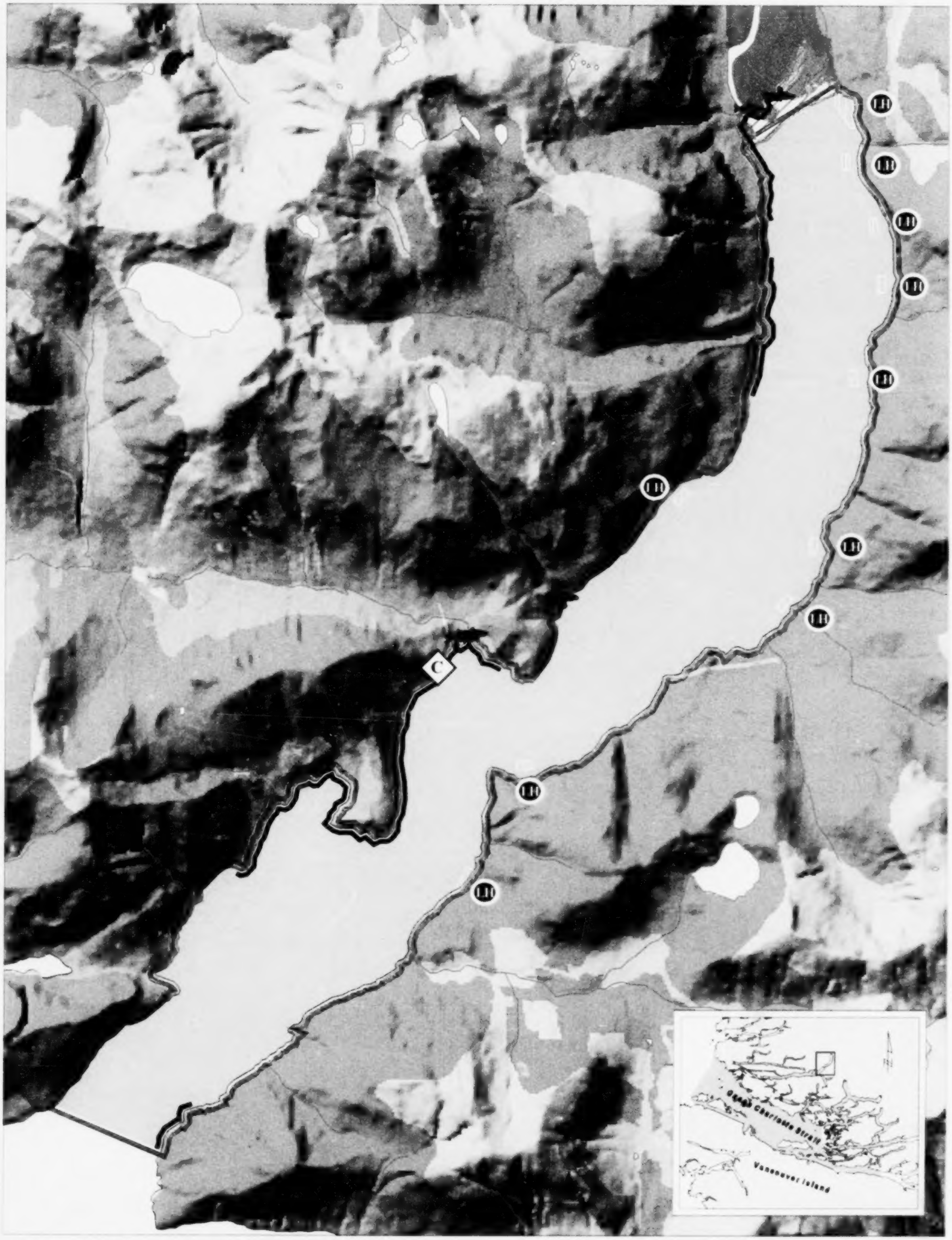
X	The use is considered inappropriate. Applications for tenure of this use should not be accepted for processing and evaluation.

Management Provisions

- This unit should be managed to accommodate existing uses and activities while minimizing impact on adjacent estuarine values.
- New tenures should be compatible with any future protection area planning or designation of estuary.
- Commercial and industrial use applications within the unit should be referred to CWS.

66 - Seymour Estuary (General Marine)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4 Plan Impact Assessment

4.1 Socio-Economic Impacts

Methodology

An attempt was made to provide a socio-economic assessment of the NIS Plan. This assessment used an "abridged" multiple accounts analysis (MAA), which is a method used by provincial planning agencies and Crown corporations for systematically documenting and evaluating impacts from a number of different perspectives or "accounts" at the provincial and regional level.[22]

The abridged analysis employed three main accounts: provincial economic development, provincial government finances, and community / First Nations. The Provincial Economic Development Account analysis used capital investment for initial development and installation, and employment / employment income as key evaluation indicators. The Provincial Government Finances Account used net provincial revenues as the key evaluation indicator. The Community/ First Nations Account analysis used local investment and employment opportunities; community stability and diversity; and recreation / subsistence values as key evaluation indicators.

The analysis consisted of both qualitative and quantitative assessments. The qualitative assessment considered the overall effect of the Plan on the existing economic conditions, and determined which of the various potential coastal uses would likely continue to occur irrespective of the Plan, as opposed to those that would be encouraged or limited by the Plan. The assessment also considered the current trends in economic conditions in the Plan Area, as well as the general opportunities and constraints provided by the Plan.

The quantitative assessment consisted of running a spatial analysis in each planning unit for uses encouraged and limited by the Plan, to determine the possible number of potential new sites that could be found. For each of these uses, impact coefficients for different coastal uses were developed (Table 10) and applied to derive the potential values for the accounts. For those uses that could not be quantified due to data limitations, a qualitative evaluation of impacts was prepared.

The economic efficiency of benefit-cost accounts within the MAA framework was not estimated in this analysis due to lack of data (particularly for non-commercial activities) and because many coastal activities do not likely generate significant rents (i.e. above-normal rates of return or profit).[23]

Table 10 Economic Impact Coefficients for Selected Coastal Uses

Foreshore/ Nearshore Use	Capital Investment ($'000/site)	Annual Direct Jobs (PYs/site)	Annual Total Jobs (PYs/site)	Annual Direct BC Revenue* ($/site)
Finfish Aquaculture	900	4.0	7.60	43,000
Shellfish Beach Aquaculture	150	0.9	1.60	9,700
Shellfish Deepwater Aquaculture	110	2.0	3.30	21,500
Marine Plant Aquaculture	6	2.0	3.30	21,500
Commercial Rec. Lodges	1150	11.0	13.30	43,900
Commercial Rec. Base Camps	490	4.9	5.80	19,600
Heli-Log Drop Sites **	460	4.0	8.30	60,000

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[22] See *Social and Economic Impact Assessment for Land and Resource Management Planning in British Columbia: Interim Guidelines*, Integrated Resource Planning Committee, August, 1993. The guidelines for land and resource management planning are currently being reviewed and updated.

[23] Building block studies do not provide economic rent estimates for coastal marine activities. Rents may exist for particular activities in particular locations, but there is little evidence of rents on an industry-wide scale. A number of coastal activities are an integral part of a larger chain of activities that make up a particular industry (e.g., log handling / storage and other transportation infrastructure). It is assumed that even if the sector as a whole generates rents (e.g. timber harvesting), the coastal component of the industry earns no more than a normal rate of return.

Log Sorts	850	1.5	3.10	22,500
Log Storage Pens	225	1.0	2.10	15,000
Public Wharf	56	1.8	3.6	26,000
Commercial Wharf	740	15.7	32.5	236,000
Tidewater Industrial	1300	47.8	58.3	121,000

Sources: Building Block reports (MSRM, 2002) and Holman (LWBC, 2002, unpublished). Data for marine plant aquaculture based on personal communication with L. Druehl and multiplier and revenue data for deepwater shellfish. The above are estimates of impacts for on-site activities (e.g., log handling / storage excludes timber harvesting and processing) plus indirect and induced spending arising from these uses.

* Includes taxes on direct, indirect and induced incomes as well as direct LWBC lease / rental fees.

** Capital investment estimate for heli-log drop sites assumes 6 sites each operated for 2 months per year.

General Assessment

The multiple accounts evaluation proved very difficult because of the nature of the Plan. The Plan provides a determination of the acceptability of certain uses, but cannot guarantee that an application will be made or that applications will be approved and result in new tenured developments. Many parts of a planning unit where a specific use is acceptable may prove to be inappropriate for development, once a site specific investigation or application has been made. Attempts to undertake a spatial analysis of planning units to determine a precise number of new sites or developments that may result from the Plan's recommendations proved very speculative. The alternative approach of basing the number of potential new sites on expert opinion and discussions held during the planning process also proved very speculative. As a result, no estimates of employment, capital expenditures or provincial rents have been included with the Plan. Instead, the Plan identifies the economic impact coefficients of various uses in Table 10, so that as new tenures are proposed and approved, the economic benefits of these new developments can be calculated for consideration in future Plan audit reports and reviews.

In general, however, the Plan designates all **existing uses** as acceptable if the use is already tenured in a given planning unit. Also, those existing activities that are neither tenured nor managed by the province (e.g. recreation activities) are identified as acceptable where they are known to be occurring. Therefore, the Plan affirms all existing uses and activities within the Plan Area, and along with them any current and projected economic benefits. However, the economic benefits of these uses, such as log handling and private moorage, are not attributed to the Plan's accounts.

In certain management units, existing uses are designated as acceptable only at current levels. It is likely that existing applications will proceed through the normal inter-agency referral process, which would consider existing siting policies and the guidelines in the NIS Plan.[24]

Alternative locations may have cost and profitability implications for planned and proposed uses which can have indirect employment, provincial revenue and community impacts. These impacts are not quantified due to their uncertain nature and a lack of readily available data.

The NIS Plan will primarily affect **future uses** and related economic development. Quantitative estimates of the incremental impacts of the Plan for key commercial uses were not identified, as mentioned above, due to the speculative nature of determining future sites. However, professional judgment suggests that over the next few years it can be assumed that there will be at least an additional 4-6 finfish farms, four new shellfish beach aquaculture sites, 6 new deepwater aquaculture sites, 1-2 new marine plant aquaculture tenures, 2 floating commercial lodges, and 5 commercial recreation base camps.

New log handling, storage and infrastructure uses would potentially occur wherever industry has identified future harvesting plans for adjacent uplands and existing siting criteria can be addressed. New commercial uses would be acceptable in management units where they exist now. The Plan may impose costs on certain aquaculture, commercial and industrial activities, particularly where uses are conditionally acceptable. However, since the Plan's main impact is to establish general direction for dealing with applications, rather than changing specific siting criteria, it is unlikely that these costs would be greater than under the current management regime.

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[24] The policy for existing applications for incompatible uses within management units will have to be clarified by Land and Water BC.

In addition to the implications for specific coastal uses, the NIS Plan has some indirect socio-economic benefits that result from coastal planning that cannot be quantified. These include greater investor certainty and reduced capital and operating costs resulting from affirmation of existing uses and clearer management direction for new development, which should clarify the terms and conditions governing the siting approval process administered by LWBC. Reduction in resource conflicts is also an anticipated benefit that will result in sustainable economic development.

The proportion of new investment and employment opportunities that will accrue to communities and residents of the Plan Area depends on the local sourcing of labour and materials, supplies and equipment. Local sourcing depends on factors such as the type of use, the proximity of the development to communities in the Plan Area, local production capacity and the hiring policies of tenure holders. Within the Plan Area, the economic benefits of the Plan are likely to accrue to the larger communities where workers live and where services and supplies are available. For example, a study of the socio-economic impacts of the salmon farming industry in the Broughton Archipelago indicated that about 15% - 20% of workers in the industry lived within the Archipelago itself.[25]

The above discussion applies to both First Nation and non-First Nation communities. Unemployment rates among First Nations are typically much higher than for non-aboriginal population, and First Nations communities are much more reliant upon a mixed-subsistence economy which relies on marine food sources, particularly fisheries, to supplement household incomes or compensate for low incomes. Aboriginal harvests of marine resources are likely to remain important parts of the Aboriginal income stream in the Plan Area. The Plan attempts to encourage increased First Nations involvement in economic activities, as well as to provide for continuation of food harvesting, and reduction in resource conflicts. If properly implemented, it should have positive economic implications for First Nations.

4.2 Environmental Impacts

Methodology

The environmental impact assessment attempts to evaluate the sensitivity of key ecological attributes found in the Plan Area to potential impacts from tenured uses recommended in the Plan, and to determine the overall environmental risks and benefits of the Plan. The assessment uses a combined quantitative and qualitative approach to evaluate the overall impacts to the Plan Area as well as impacts to each of the 66 planning units. As there is no way to estimate the actual range and number of new tenured uses or marine protection areas that might occur as a result of the Plan, the environmental assessment provides only a rough approximation of potential environmental risks and benefits.

The Plan Area as a whole was evaluated according to the overall distribution of each of the four management emphasis categories as well as key ecological attributes, including eelgrass beds, threatened and endangered species, and salmon holding areas. The environmental protection measures included in the Plan, such as management provisions and conservation assessment areas were also examined as part of the overall Plan impact assessment.

For the individual unit assessment, a more quantitative approach was used to identify the relative risks and benefits of the Plan. This required identifying five Valued Environmental Components (VECs): kelp beds, intertidal clam beaches, salmon streams, seabird habitat, and pinniped (seal and sea lion) haul out areas. Where data was available, the value or importance of each of the five VECs for each unit was rated, based on its relative abundance within the unit. While data availability was one of the considerations in selecting the VECs, the environmental assessment is nevertheless limited by the accuracy and comprehensiveness of currently available biological information in the Plan Area. The level of existing and potential tenures was also rated for each unit. For each combination of VEC and tenure type, a sensitivity rating was assigned. The ratings for VEC value, tenure type level, and VEC-tenure sensitivity were then combined to obtain a "relative risk" value. By aggregating the results of this analysis, it was possible to make overall assessments of the potential risks to VECs in each unit and in the Plan Area as a whole. Adjacency issues, management provisions and conservation areas recommended in the Plan were also assessed qualitatively to augment the unit assessment.

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[25] Plan Area impacts are based on *Socio-Economic Impacts of Existing Salmon Farming Operations in British Columbia*, M. Shaffer and Associates, 1997.

A more detailed outline of this methodology and its application to the Plan Area can be found in Appendix 5.

General Plan Environmental Impact Assessment

The Plan in general does not recommend elimination of existing tenures, although for some uses (primarily finfish) the Plan recommends that no additional tenures be contemplated. It can therefore be assumed that the existing levels of environmental impact as well as potential risk to the marine environment are maintained.

In terms of assessing new environmental risk attributable to the Plan, the categorization of planning units by management emphasis is also a factor. The Conservation emphasis units, which account for almost 17% of the Plan Area, tend to afford greater benefit to environmental attributes as they are predominated by or adjacent to significant marine and foreshore ecological values. Units assigned a Recreation emphasis, accounting for 12% of the Plan Area, are often adjacent to significant protection areas and tend to favour conservation of important biological attributes which contribute to the overall quality of the recreation experience. The General Marine emphasis units, occupying the largest proportion of the Plan Area at 65%, tend to have a greater variety of potential uses, and therefore vary in potential environmental impact, although these units are typically characterized by lower biological values. The Community emphasis, accounting for 6% of the Plan Area, promotes multiple uses and activities associated with adjacent floating or upland settlement areas, therefore, affording the least benefit to environmental values.

Appendix 5 summarizes the degree to which key identified biological attributes are represented by planning units in the four management emphasis categories. Encompassing almost one fifth of the Plan Area, Conservation emphasis units contain a significant proportion of kelp beds, invertebrate fisheries values, clam beds, abalone, herring spawn records, seabirds habitats, and seal and sea lion haul out areas. However, biological attributes such as eelgrass beds, eulachon spawning areas, adult salmon holding areas, and orca habitat may be left more vulnerable by their relative lack of representation in Conservation emphasis units.

The management provisions that promote environmental impact mitigation or otherwise reduce impact on biological resources should also help to reduce the overall environmental risks of new tenured uses. Most management provisions are general and tend to be applied to units with a Conservation emphasis. However, they are not applied to all units with key biological attributes, and consequently may increase the environmental risks from new development in non-Conservation emphasis units. Offsetting some of the potential risks are the many government agency siting guidelines and criteria which are applied to mitigate or avoid impacts to specific marine biological attribute when development is proposed. These siting guidelines and criteria were incorporated in the VEC-tenure sensitivity assessment.

The NIS Plan recommends notations of interest (NOIs) for marine conservation and protection for specific areas within seven Conservation emphasis and four Recreation emphasis units. These areas are to be further assessed as part of a federal-provincial marine conservation assessment. Depending on the outcome of this assessment, the Plan may lead to a higher level of marine protection for these high value areas than is currently afforded by the Plan.

Finally, the Plan identifies "conservation" uses as acceptable uses in all of the 66 planning units. This means that there may be further opportunities to afford protection or conservation of discrete areas of high biological values through the establishment of *Land Act* reserves or notations of interest. These opportunities may therefore result in additional protection of values that cumulatively should help offset some of the overall environmental risks associated with new tenures in the NIS Plan Area.

Individual Unit Environmental Assessment

Appendix 5 contains the results of the environmental assessment for each unit. According to this assessment, and the information used, 44 units are rated as having low residual risk (i.e. there is little or no change between existing and potential Plan risk), 16 units moderate (i.e. there is a notable change between existing and potential Plan risk), and 4 as high (i.e. there is a marked change between existing and potential Plan risk). Two units were rated as having a decrease in risk under the Plan, compared to the existing management regime. This is largely a reflection of a restriction of further expansion of the few existing tenures in these units. In general, all VECs experience increased environmental risk due to increased potential use in the Plan Area.

Summary of Assessment

It is difficult to quantify the degree of environmental risk associated with the NIS Coastal Plan, primarily because it does not in itself result in the approval of tenured uses. The number and type of *actual* new tenures that may be derived from the Plan is also highly speculative, although the Plan does recommend restricting certain types of uses. There is also considerable debate and lack of clear scientific knowledge of the effect of various foreshore uses on marine ecosystems. As a result, the environmental impact assessment is largely qualitative.

The environmental assessment has been constructed on two levels, the first being an overall assessment of the potential risks and benefits from the Plan's general approach and direction. The second level has focused on assessing the risks for each individual planning unit, addressing the presence of VECs and the potential effect of the recommended tenured uses and management provisions on these VECs. Due to limitations in the available data and uncertainties about the *actual* tenured uses that may occur, the results of the quantitative assessment should be interpreted with care. The assessment represents a high-level approach that focuses on only a small number of environmental components within an area that is ecologically diverse and geographically varied.

In general, the existing risk and impact levels are assumed to continue for existing tenures, which are generally recommended to continue under the Plan. New risks will depend on the increase in numbers and types of tenures, which are difficult to determine as they depend on many factors independent of the Plan. Since almost 17% of the Plan Area is identified as Conservation emphasis and 12% as Recreation emphasis, it can be assumed that management provisions and types and levels of tenured uses will provide for lower environmental risk in these areas of generally high biological value. The General Marine and Community emphasis areas may have potentially higher risks to ecological values as they accommodate many forms of commercial and industrial uses, although they have generally lower biological values. Further conservation assessments for 11 areas of high biological value may lead to increased levels of protection for these areas. The opportunity for "conservation" uses in all units may cumulatively offset or reduce environmental risks over the Plan Area.

A quantitative unit-by-unit risk assessment, focussed on five VECs rated 4 of 66 units as having a residual "high risk," 16 units as "moderate", 44 units as "low," and 2 units as having a decrease in risk under the Plan, when compared to the present levels of risk. High risk units tend to be those with high ecological values that could experience a potentially significant increase in new tenures, but which have minimal management provisions for biological values. All VECs experience increased environmental risk due to increased potential uses in the Plan Area's 66 planning units.

5 Plan Follow Up

5.1 Information Limitations

The individual unit maps and unit direction will be used by LWBC, potential applicants and the public to determine the degree of acceptability of a Crown foreshore or nearshore application. However, Plan users should be aware of the limitations inherent in the planning unit descriptions and maps. While the maps and text for each unit outline the complexity of values and uses within each unit, they can only represents information available at the time of Plan preparation and as a result cannot and should not replace any LWBC requirements for more site specific information to accompany an application. In addition, the information on First Nations use in each planning unit must be considered preliminary and largely incomplete since most First Nations did not participate in the Plan or provided very limited information.

Since the planning unit maps are available on the MSRM web site and are linked to all supporting maps and information sources within MSRM, they will be regularly updated and will therefore be of increasing value to LWBC and other users in such activities as plan monitoring, plan amendment, site planning and marketing.

5.2 Plan Variation Process

Plan provisions that identify applications for a use in a planning unit as "inappropriate" or "acceptable only in its current location" may be challenged on a site-by-site basis. This process to vary the Plan's recommendations must be made in writing to the LWBC Service Centre Director by the proponent.

LWBC should only accept a request for Plan variation if it is based on one or more of the following conditions, which are to be specifically addressed in the variation request letter:

1. The proposed use is based on new technologies or methods of operation that were not available, not contemplated or not considered during development of the Plan;
2. The proposed use represents, or is part of a new economic activity or venture that was not considered or contemplated during development of the Plan;
3. The proposed use is based on new information that was not available at the time of plan development

Letters of support from local government and / or First Nations are encouraged in support of the variation proposal.

The recommended Plan variation process is as follows:

1. The proponent provides a formal letter requesting Plan variation to the LWBC Service Centre Director, with relevant rationale and documentation, including geographic location of the proposal. A non-refundable fee will be levied by LWBC for accommodating the request.
2. Within 15 days of receiving the appeal, the variation request letter will be distributed to a standing interagency resource management committee for consideration (or, in absence of this committee, to the Coast & Marine Planning Branch of MSRM).
3. The committee will review the variation request and make a recommendation to the LWBC Service Centre Director within 60 days of receipt of the letter from LWBC. The proponent may be requested to make a presentation to the interagency management committee. The committee will recommend acceptance or rejection of the variation request and any subsequent information required for inclusion in a tenure application if the request is upheld.
4. LWBC will consider the recommendations of the committee and advise the appellant of the LWBC decision. If the decision is to accept an application, the proponent may complete the LWBC application form and the application will be processed according to LWBC standard procedures, subject to any other LWBC requirements or issues.

LWBC acceptance and processing of an application based on a successful Plan variation request should not be interpreted as support for issuance of a tenure by LWBC or the interagency management committee.

A successful Plan variation request will not automatically result in change to the Plan's acceptable use provisions for that unit. Permanent change to such provisions may, however be made at the time of annual review if there have been a large number of variation requests.

The Plan variation process should be formalized through an agreement between the LWBC Service Centre Director and the MSRM Regional Director.

5.3 Plan Monitoring, Review and Amendment

On the anniversary date of Plan approval, the Ministry of Sustainable Resource Management (MSRM) will prepare an internal audit report on tenure applications and approvals that addresses the degree of compliance with the Plan. A listing of interpretation issues, Plan variation requests and any public comments received during the report period, as well as recommended plan amendments will be included in the report along with recommended actions or plan adjustments.

The audit report will be presented to the standing interagency committee chaired by MSRM. Opportunities will be provided at that time for changes to the Plan to reflect recommendations from the annual report. The committee will consider at that time the need for any broader review by agencies, the public, and interest groups.

The Plan must be formally reviewed by the interagency committee three years after initial approval. On the basis of this formal review, the Plan may be redrafted and reaffirmed by government. The process for reaffirmation or redrafting will include discussions with affected local government, First Nations and interest groups. Any revised or modified Plan will be posted on the MSRM website.

5.4 Implications for Central Coast LRMP

The NIS Coastal Plan is distinctly different in approach and scale from the Central Coast LRMP, which when concluded in 2003 will result in a government decision on upland resource management and protection adjacent to the marine areas within the NIS Plan.

The NIS Plan has taken into account in its unit assessments the protection area proposals and temporary Order in Council reserves that have been placed on adjacent upland areas through the LRMP process. The NIS Plan has made its recommendations for acceptability of use on the basis of compatibility of potential foreshore and nearshore uses with adjacent upland uses and values. In addition, the NIS Plan has recognized that these upland protection area proposals may not necessarily be approved as conventional parks under the *Park Act,* but as areas under different legislation and management arrangements that may accommodate a more flexible array of uses.

As a result, the recommendations of the NIS Plan concerning opportunities to apply for foreshore and nearshore tenures will not be superceded or negated by Central Coast LRMP recommendations for upland protection areas and resource management strategies.

As a consequence, it is recognized that the current LWBC siting criterion that requires finfish farms to be 1 km from an existing park or ecological reserve will not be applied to protection areas and parks that are created as a result of the Central Coast LRMP. Instead, the recommendations of the Plan will be followed respecting the opportunity to apply for finfish tenure, and any final decision to approve a site will be made by LWBC on the basis of other factors such as site conditions, biological impact and other siting requirements.

It is further recommended that LWBC work with MAFF and WLAP to clarify siting criteria related to approved planning processes and new approaches to protection areas in the Central and North Coast.

5.5 Recommended Notations and Reserves

Some NIS planning units recommend a *Land Act* notation of interest be placed or maintained (if already present) so that applications for uses recommended in the planning unit are not processed unless they can accommodate the interests of the agency with the specific interest in maintaining conservation or recreation values of the area. In addition, one planning unit includes a recommendation that a reserve be placed under the *Land Act*, to preclude the issuance of tenures.

For those areas recommended as boat havens, boundaries should be established using the proposals submitted to government by the BC Council of Yacht Clubs. For the areas recommended for conservation and protection, boundaries should be based on those identified in the 1997 CCGAT report on revised study areas for the Central Coast LRMP.

In order for LWBC to place notations or reserves over these areas, official letters of request will be required from WLAP and (in some cases) from Canadian Wildlife Service.

A summary of areas is provided in Table 11 below.

Table 11. Summary of Areas Recommended for Land Act Notation of Interest (NOI) or Reserves

Planning Unit No. & Name	Specific Area	Purpose & Sponsoring Agency
Unit 5: Havannah Channel	Burial Cove	NOI- Boat Haven -WLAP
Unit 7: Chatham Channel	Cutter Cove	NOI- Boat Haven-WLAP
Unit 9: Clio Channel	Potts Lagoon	NOI- Boat Haven-WLAP
Unit 10: Boat Bay	Boat Bay; Growler Cove	NOI- Boat Havens-WLAP
	Entire Marine portion of Unit	NOI- Marine Conservation and Protection-WLAP
Unit 14: East Broughton	Bootleg Cove	NOI- Boat Haven-WLAP
	Foreshore of Joe Cove, Eden Island, Arrow Passage, Spring Passage, Midsummer Island, Swanson Passage, Crease Island	NOI- Marine Conservation and Protection (consider Reserve after CCLRMP concluded)-WLAP
Unit 15: Burdwood Group	Entire Marine portion of Unit	NOI- Marine Conservation and Protection- WLAP
Unit 16: Echo Bay	Shoal Harbour	NOI- Boat Haven-WLAP
Unit 22: Cullen Harbour	Cullen Harbour portion of Unit (excluding Booker Lagoon)	NOI- Marine Conservation and Protection-WLAP
Unit 25: Moore Bay/ Shawl Bay	Laura Bay	NOI- Boat Havens-WLAP
Unit 32: Wells Passage	Tracey Harbour	NOI- Boat Haven-WLAP
Unit 35: Watson West	Claydon Bay	NOI- Boat Haven-WLAP
Unit 47: Nigei Gordon Group	Browning Pass	NOI- Marine Conservation and Protection-WLAP
Unit 50: Polkinghorne	Dickson Island	NOI- Boat Haven-WLAP
	Polkinghorne Islands marine portion of Unit	NOI- Marine Conservation and Protection-WLAP
Unit 51: Blunden Harbour	Blunden Harbour	NOI- Boat Haven-WLAP
	Bradley Lagoon	NOI- Marine Conservation and Protection-CWS & WLAP
Unit 52: Shelter Bay	Shelter Bay	NOI- Boat Haven-WLAP
Unit 53: Deserters & Walker Group	Walker Group of Islands	NOI- Boat Haven-WLAP
	Entire marine portion of Unit	NOI- Marine Conservation and Protection-CWS & WLAP
Unit 54: Storm, Pine, Buckle	Entire Marine portion of Unit	Reserve- Marine Conservation and Protection-CWS & WLAP
Unit 55: Cape Caution	Miles Inlet; Treadwell Bay	NOI- Boat Havens-WLAP
	Entire Marine portion of Unit	NOI- Marine Conservation and Protection-WLAP
Unit 57: Numas Islands	Numas Islands marine portion of Unit	NOI- Marine Conservation and Protection-CWS & WLAP

Planning Unit No. & Name	Specific Area	Purpose & Sponsoring Agency
Unit 63: Belize	Strachan Bay	NOI- Boat Haven-WLAP
Unit 64: Alison	Peet Bay	NOI- Boat Haven-WLAP

5.6 Marine Conservation and Protection Assessments

Eleven NIS planning units contain areas recommended as temporary notations of interest or reserves, for the express purpose of maintaining key values while further assessment for marine conservation and protection is completed. Options for conservation and protection management include one or combinations of such designation tools as: provincial marine parks or federal National Marine Conservation Areas; *Canada Oceans Act* marine protected areas; fisheries closures; and permanent *Land Act* reserves.

DFO has recently initiated an integrated management planning process for the Central Coast region, pursuant to the July 2002 *Canada Oceans Strategy* and an associated policy for integrated management of coastal and marine areas. The policy provides for mechanisms to address marine conservation and protection requirements in marine ecosystems. These mechanisms will likely include regional bodies and processes capable of review and implementation of a strategy for conservation and protection of marine habitat on a regional basis.

Since the assessment and recommendation as to most appropriate conservation or protection tools for individual areas is a shared federal and provincial responsibility, the areas recommended in the NIS Plan (see Table 12) should be jointly assessed during the next 12 – 24 month period, and recommendations as to the most appropriate management option identified. The outcomes will be reflected in the formal NIS Coastal Plan review and amendment, scheduled in year three of the Plan's implementation.

Table 112. Summary of Areas Recommended for Marine Conservation and Protection Assessments

Affected NIS Planning Unit	Unit 10. Boat Bay Unit 14: East Broughton (portion) Unit 15: Burdwood Group Unit 22: Cullen Harbour (portion) Unit 47: Nigei Gordon Group (portion) Unit 50: Polkinghorne (portion) Unit 51: Blunden Harbour (portion) Unit 53: Deserters & Walker Group Unit 54: Storm, Pine, Buckle Islands Unit 55: Cape Caution Unit 57: Numas Islands (portion)
Participants	DFO Central Coast Area is federal lead as part of Central Coast Integrated Oceans Management initiative; include CWS, Parks Canada. Province led by MSRM and WLAP Assisted by advisory group comprised of local government and First Nations groups Consultation required with First Nations
General Process	Reassess proposals from NIS plan, other sources; review scientific information, values, boundaries, management requirements Assess level of support form governments, communities, First Nations Begin processes within appropriate governments for final consideration and designation of recommended candidates
Timeframe	Commence by April 2003 Complete within 12 -24 months
Resultant Product	Report and Action Plan for Candidates to MSRM & DFO

5.7 Tourism and Recreation Campsite Management

Six NIS planning units in the Johnstone Strait area are the subject of concern from different groups over increasing levels of public and commercial recreational activity. Commercial sea kayak guides have indicated a need for predictable access to campsites in this popular area, while recreational paddlers seek assurance that a portion of the area's campsites will remain available for their use. The Regional District of Mount Waddington (RDMW) recognizes the need to manage camping in the area, and to protect the quality of experience for both tourists and recreational paddlers. The Tlowitsis First Nation is interested in improving its involvement and influence over visitation to avoid disturbance or desecration of culturally significant sites. LWBC is actively working on policy aspects of commercial recreation. A strategy for campsite management and allocation is recommended for this area, to address both recreation and tourism uses, as outlined below in Table 13.

Table 13. Summary of Areas Recommended for Campsite Management and Allocation Strategy

Affected NIS Planning Unit	Unit 1: Haylahte (Adam and Eve Estuary) Unit 2: Broken Islands Unit 3: Johnstone Unit 10: Boat Bay Unit 40: Hanson Unit 41: Blackfish Sound
Participants	MSRM to fund project. Steering committee of LWBC & MSRM staff; chaired by MSRM. Involve RDMW, Tlowitsis and other affected First Nations as required. Include public and commercial recreation groups, associations.
General Process	Steering committee to establish project terms of reference and costing. Steering committee to coordinate strategy development. Strategy to include: Identification of recreational campsites & assessment of area carrying capacity Identification of First Nation sensitive areas and other concerns Development of options for campsite allocation & management, including public-private, local government, and First Nations partnerships Assessment of feasibility of identified options
Timeframe	Commence by January 2003 Complete by June 2003
Resultant Product	Report & recommendations for LWBC review, decision & implementation.

5.8 Commercial Recreation Guiding Practices for Bird Colonies and Migratory Bird Habitat

Section 3 of the Plan identifies nine NIS planning units where commercial recreation guiding uses should be conditional on following established guidelines and/ or performance based standards for minimizing disturbance and impact on bird colonies and migratory bird habitat. These units are summarized in Table 14 below, along with recommended outline for development and scope of such guidelines.

Table 14. Summary of Areas Requiring Guidelines for Commercial Recreation Operating Practices

Affected NIS Planning Unit	Unit 14: East Broughton Unit 17: Tribune North Unit 42: Cormorant Channel Unit 47: Nigei Gordon Group Unit 53: Deserters & Walker Group Unit 54: Storm, Pine, Buckle Islands Unit 55: Cape Caution Unit 57: Numas Island Unit 58: Foster
Participants & Process	CWS, WLAP to develop guidelines and /or performance based standards with LWBC. Tenure applicants to consult with appropriate agency as to availability of guidelines / standards.
Time Frame	Time frame for development established by agencies.
General Content	Location of sensitive species, type of species and habitat Species populations, lifecycle events e.g. breeding, rearing, feeding and migration. Species sensitivities during activities e.g. noise disturbance during breeding. Proposed operating activities and timing, distances.

5.9 First Nations Contacts and Considerations/ Provisions

The Province considers First Nations involvement in reviewing NIS planning unit recommendations as an opportunity to accommodate First Nations interests and information. Through such involvement, the Plan is intended to foster improved working relationships, reduced impact of land use activities on First Nations activities, and greater participation of First Nations in economic development of resources. However, it should be noted that while some First Nations did not respond to invitations for involvement or review, others have indicated their objections or concerns about the process. These concerns are identified in letters from First Nations, and have been posted on the MSRM web site under the NIS Coastal Plan page. Included are concerns about the relationship of the planning process to ongoing treaty negotiations as well as the Plan's ability to protect Aboriginal harvesting rights. As previously stated, the Plan is not binding on, and is not intended to limit treaty negotiations.

Although only two First Nations engaged with the Province in review of planning unit information and recommendations, the Plan seeks to encourage tenure applicants to develop working relationships with all First Nations identified within NIS planning units. Such working relationships could include, but not be limited to, discussions of the following:

- joint venturing or partnerships for development
- major First Nations involvement in operations
- training and employment of First Nations people in a development or tenure
- recognition and avoidance of applying for tenure in areas of significance to First Nations
- use of First Nations support in marketing of a development or business
- guardian programs for marine conservation and recreation areas.

It is also recommended that non-tenured users of Crown foreshore and nearshore make efforts to engage First Nations in discussion, where an activity is potentially in conflict or a source of friction with First Nations cultural values and sensitive sites.

Table 15 provides a contact list of area First Nations to assist the general public and potential applicants in making contact and pursuing such discussions. Regular updates of the list and corresponding maps of traditional territories may be found at the following Ministry of Forests web site: http://www.for.gov.bc.ca/vancouvr/district/pmcneill/FirstNations/fn.htm

Table 15. Contact List for First Nations of NIS Plan Area

Name	Address	Phone	Fax
Namgis First Nation c/o Administrator	PO Box 210 Alert Bay BC V0N 1A0	974-5556	974-5900
Tsawataineuk First Nation c/o Administrator	General Delivery Kingcome Inlet BC V0N 2B0	974-3013	974-3005
Kwicksutaineuk/Ah'K'waha' c/o Administrator	General Delivery Simoon Sound BC V0P 1S0	974-3001	
Tlowitsis Nation c/o Administrator	141 Beech Street Campbell River BC V9W 2E4	830-1708	830-1709
Gwawaenuk Tribe c/o Administrator	Box 344 Port McNeill BC V0N 2R0	949-8732	949-8732
Kwakiutl First Nation c/o Administrator	Box 1440 Port Hardy BC V0N 2P0	949-6012	949-6066
Mamalilikula Que'Qwa'Sot c/o Administrator	1441A Old Island Highway Campbell River BC V9W 2E4	287-2955	287-4655
Da'Naxda'Xw c/o Administrator	Box 330 Alert Bay BC V0N 1A0	974-2179	974-2109
Gwa-Sala Nakwaxda-Xw c/o Administrator	Box 1230 Port Hardy BC V0N 2P0	949-7402	949-8343
Tlatlasikwala (Hope Island) First Nation c/o Administrator	Box 578 Port Hardy BC V0N 2P0	949-7297	949-7297

5.10 Recommended Projects to Enhance Economic Development Opportunities

The NIS Plan identifies potential opportunities for use of foreshore and nearshore. However, availability of land is only one of several factors that determine the willingness of the private sector to apply for tenure in the area. Other factors such as policy constraints, lack of skills, training, infrastructure, transportation facilities, inspection facilities, and capital investment may create local barriers and constraints to future success of the NIS Plan.

Key recommendations for exploring and enhancing the development opportunities inherent in the NIS Coastal Plan Area are outlined below in Table 16.

Table 16. List of projects to enhance economic development in NIS Plan Area

Marketing Strategy for NIS Plan	• MSRM to fund strategy for marketing of Plan opportunities in cooperation with LWBC, MSRM, RDMW and local communities. • Strategy will identify key industries, associations & investors, and promote strategic alliances with First Nations. • Complete strategy by March 2003
Shellfish Aquaculture Economic Barriers & Constraints Study	• MSRM to fund study of economic and business barriers for North Island. • Steering committee chaired by MAFF with MSRM, LWBC & RDMW. • Complete study before April 2003.
Finfish Aquaculture Salmon Stream Siting Review	• MSRM to fund assessment of current siting criterion for distance of finfish farms from salmon bearing streams for NIS units identified as "acceptable" for finfish aquaculture. • Steering Committee chaired by MAFF with MSRM & LWBC, working with DFO. • Complete study by May 2003.
Community Harbour Enhancement Feasibility Assessment	• MSRM to fund feasibility study for expanding Port Hardy, Port McNeill, Alert Bay, Sointula, Beaver Cove harbour management responsibilities. • Steering committee chaired by MSRM with LWBC, RDMW. • Study will investigate opportunities for LWBC sub-leases to local communities & for CCG & DFO transfer of responsibility for navigation, transport and small harbours. • Intent is to increase local benefits, revenues associated with harbour development & improve positioning for future port development. • Complete feasibility study by May 2003.

Table 17. Summary Schedule of Follow Up Activities

Sequence	Name of Activity	Initiation Date	Lead Responsibility
1	Develop an interagency agreement for Plan variation process	December 2002	LWBC & MSRM directors
2	Official requests submitted from agencies for notations of interest	December 2002	WLAP and CWS
3	Prepare finfish aquaculture salmon stream siting criterion review for NIS Plan Area	December 2002	MAFF (chair) with LWBC, MSRM
4	Clarify LWBC aquaculture siting criteria for candidate and temporary parks & protection areas in planning processes	January 2003	LWBC (chair) with MAFF, WLAP
5	Prepare shellfish barriers & constraints study	January 2003	MAFF (chair) with MSRM, LWBC
6	Develop campsite management & allocation strategy	January 2003	MSRM (chair) with LWBC
7	Develop operating guidelines/ performance based standards for minimizing impact of tenure operations on bird colonies & migratory bird habitat.	January 2003	LWBC with WLAP, CWS
8	Establish notations and reserves	February 2003	LWBC

Sequence	Name of Activity	Initiation Date	Lead Responsibility
9	Develop a Plan marketing strategy	February 2003	MSRM (chair) with LWBC
10	Conduct feasibility study for enhanced community harbour management responsibilities	February 2003	MSRM (chair) with LWBC, RDMW
11	Initiate marine conservation & protection assessments	April 2003	MSRM & WLAP with DFO, CWS, Heritage Canada
12	Prepare 1st Annual Audit & address Plan amendments	December 2003	MSRM
13	Prepare 2nd^{d} Annual Audit & address Plan amendments	December 2004	MSRM
14	Prepare 3rd Annual Audit & Formal Plan Redraft (if required)	December 2005	MSRM
Ongoing	Planning Unit Variations	As required	LWBC

Appendix 1. Governance Principles for Sustainable Resource Management in British Columbia

Vision

Sustainable resource management that optimizes economic development of the province's natural resources while protecting ecosystem integrity, enhancing community well being and ensuring an enduring legacy of prosperity for future generations.

Goals

- A strong, competitive and vibrant provincial economy
- A supportive social infrastructure
- Safe, healthy communities and a sustainable environment
- Sound Governance

Sustainability Principles

Integration – Ensuring that resource management decisions integrate economic, environmental and social considerations for the benefit of present and future generations.

Accountability – Setting performance-based standards and indicators and implementing mechanisms for compliance, auditing and reporting on the sustainable management of Crown land and resources. These standards and mechanisms must consider the interests of present and future British Columbians in resource management decisions. An effective enforcement regime is a key part of accountability.

Efficiency – Maximizing the net benefits arising from the allocation, development and use of Crown land and resources. Efficiency also means making timely decisions to promote certainty.

Transparency – Establishing clear and open decision-making processes and ensuring that decisions are understandable and that key interests have been consulted prior to decisions. Transparency also includes the public release of monitoring and compliance records and tracking of sustainability indicators.

Science-based decision making - Making predictable and justifiable decisions informed by science-based information and risk assessment.

Innovation and Competitiveness – Encouraging innovative approaches and technologies to ensure sustainability of resources.

Continual Improvement – Learning from the past and looking for new and better approaches.

Shared Responsibility – Encouraging co-operation among First Nations; federal, provincial and local governments; industry and non-governmental organizations in designing and implementing policies.

Appendix 2. Agency and Interest Group Discussions

Table A.1 Summary of Government Agency and Interest Group Meetings

Agency or Interest Group	Location & No. of Meetings
Land & Water BC- Staff	Nanaimo-5
Ministry of Agriculture, Fisheries & Food- Staff	Victoria-3
Ministry of Forests- Staff	Port McNeill-4
Ministry of Water, Land & air Protection- Staff	Nanaimo-1
Ministry of Energy & Mines- Staff	Victoria-3
Department of Fisheries & Oceans- Staff	Port Hardy-3
Parks Canada- Staff	Victoria-1
Canadian Wildlife Service- Staff	Ladner-2
Canadian Coast Guard- Staff	Vancouver-1
Central Coast LRMP Table	Port Hardy-1
Mt Waddington Regional District- Staff	Port McNeill-7
Mt Waddington Regional District- Board	Port McNeill-3
Village of Alert Bay- Council	Alert Bay-1
Mt Waddington Plan Advisory Board	Port McNeill-1
Canadian Parks & Wilderness Society	Vancouver-2
Living Oceans Society	Sointula-3
Malcolm Island Environmental Protection Society	Sointula-1
Combined North Island Fisheries Centre- Staff	Port Hardy-1
Underwater Harvesters Association	Nanaimo-1
BC Salmon Farmers Association	Campbell River-3
Omega Salmon Farms	Campbell River-2
Heritage Aquaculture	Campbell River-1
Stolt Sea Farms	Campbell River-2
Outdoor Recreation Council	Vancouver-1
BC Council of Yacht Clubs	Victoria-2
North Island Ecotourism Operators	Port McNeill-3
Sport Fishing Institute of BC	Vancouver-1
Council of Marine Carriers	Vancouver-1
Weyerhauser	Nanaimo-2
Western Forest Products	Nanaimo-2
Interfor	Nanaimo-2
Millen Timber	Nanaimo-1
Shushartie Log Sales	Nanaimo-1

Appendix 3. First Nations' Interaction and Comments

Table A.2 Summary of First Nations and Aboriginal Group Interactions

Date	Nature of Interaction
October 25 2001	Letters sent to chairs of KDC/ MTTC/ Tlowitsis joint council advising of public open houses on November 6-7 to commence NIS planning process, and inviting attendance.
November 6-7 2001	Open houses held for introducing NIS planning project. Open house attendees included representatives from Tlowitsis, Namgis & Gwa'sala Naxwax'da. Commitment made to meet to discuss Gwa'sala Naxwax'da future involvement.
November 7 2001	Letter received from Namgis acknowledging invitation to open houses, expressing concerns about relationship of NIS to CCLRMP process, requesting assurances that opportunity for input and negotiation on NIS will be provided, and extending offer to meet and discuss.
November 16 2001	Letter sent from CMPB to Namgis in response to November 7 letter. Letter expresses interest in working with Namgis on the NIS Plan.
December 7 2001	Meeting of CMPB & LWBC staff with Gwa'sala Naxwax'da council in Port Hardy to explain NIS Plan and invite participation. Results in commitment to further explore their involvement in Plan, and to arrange another meeting.
December 11 2001	Letter sent from CMPB to Gwa'sala Naxwax'da Council confirming outcome of December 7 meeting.
December 13 2001	Meeting of CMPB & Namgis staff & council members in Alert Bay to discuss NIS process and possible Namgis involvement.
December 14 2001	Meeting of CMPB with General Assembly of KDC / MTTC / Tlowitsis members in Campbell River. CMPB advised to deal with individual member bands as the KDC/ MTTC/ T group is preoccupied with CCLRMP completion table.
February 15 2002	Meeting of CMPB with Gwa'sala Naxwax'da Council in Port Hardy to further explore involvement in NIS Plan. No commitment made by Gwa'sala Naxwax'da.
March 15 2002	Meeting with Tlowitsis Nation in Campbell River results in signed agreement for review and input to unit maps and recommendations within traditional territory.
April 12 2002	Meeting of CMPB with Tlowitsis staff in Nanaimo to present draft plan recommendations for Tlowitsis review.
April 24 2002	CMPB presentation of draft agreement to Gwa'sala Naxwax'da staff in Port Hardy. Agreement left with staff for discussion with Council.
May 1 2002	Letter sent from CMPB to Gwa'sala Naxwax'da Council reiterating NIS Plan intent and officially forwarding copy of draft agreement provided to staff on April 24 for consideration.
May 23 2002	Letters from CMPB to all NIS First Nations advising of upcoming June open house meetings to review draft plan, availability of Plan on web site, and inviting further discussion on direct involvement of each First Nation in the planning process.
June 10-13 2002	Open houses held for draft Plan review and input. Open house attendees included representatives from Tlowitsis, Namgis, Gwa'sala Naxwax'da and Kwakiutl. Commitment made to send relevant unit maps and recommendations to Kwakiutl Chief and Council.
June 10 2002	Letter delivered to CMPB from Namgis Chief raising questions on NIS Plan and indicating Namgis unable and unwilling to engage in the planning process.
June 19 2002	Meeting with Tlowitsis staff and representative of Hanson Island First Nations to discuss potential deferral of decisions adjacent to Hanson Island. Results in decision to defer tenure decisions until June 30 2003.
August 13 2002	Meeting with Tlowitsis Chief and staff in Vancouver to receive preliminary recommendations and comments on planning units.
September 18 2002	Fax letter received from Kwakiutl Territorial Fisheries Commission (KTFC) expressing concern about Plan information and requesting a meeting. CMPB responded by telephone September 25 and offered to meet with KTFC board. Meeting confirmed for October 16.
September 18 2002	Fax letter received from Gwawaenuk Chief indicating they were unaware of NIS process and indicating willingness to participate in consultation on Plan as well as requesting financial support for involvement.

Date	Nature of Interaction
September 20 2002	Meeting held between CMPB and Tlowitsis in Nanaimo to review draft Plan recommendations as revised to accommodate August 13 input from Tlowitsis.
September 24 2002	E-mail request made to contact MTTC administrator to provide further information on NIS Plan. CMPB responded with telephone conversation to administrator on Sept 24, indicating willingness to meet with MTTC if required.
September 27 2002	Letter sent to Gwawaenuk Chief from CMPB indicating surprise about lack of awareness of Plan and expressing interest in meeting to discuss involvement. Subsequent telephone calls led to arranged meeting on October 1 2002.
October 1 2002	Meeting held between CMPB and Gwawaenuk Chief in Victoria to negotiate terms of involvement in NIS Plan review. Draft Plan and units with maps provided to Gwawaenuk. Commitment made to develop agreement and to extend Plan process completion.
October 4 2002	Meeting held between CMPB and Gwawaenuk Chief in Victoria to familiarize Gwawaenuk contractor with Plan information and provide additional copies of units with maps. Draft agreement provided to Gwawaenuk for review.
October 8-9 2002	Negotiations held between CMPB and Gwawaenuk legal counsel on clauses within draft agreement. Changes made to draft agreement.
October 9 & 11 2002	Letters sent by CMPB to all NIS First Nations providing copy of draft Plan and offering opportunity for formal review and comment by November 9 2002.
October 10 2002	Agreement signed between Gwawaenuk and CMPB for preliminary review of planning information and recommendations in Gwawaenuk traditional territory by November 11.
October 15 2002	E-mail request received fromNamgis requesting time extension for formal Plan review. Extension to November 18 confirmed by return e-mail message.
October 16 2002	Meeting held between KTFC board and CMPB in Alert Bay to provide information on draft Plan. Commitment made to send copies to KTFC staff and members.
November 5 2002	Letter received by Minister Hagen from Kwakiutl District Council (KDC requesting time extension for comments from organization member nations. Response letter drafted and sent, indicating further time available.
November 8 2002	Telephone request received from Gwawaenuk for time extension for Plan review. Extension to November 18 confirmed by letter.
November 14 2002	Formal response received from Tsawataineuk First Nation, identifying recommended changes to planning units. Changes to draft Plan subsequently made to address most recommendations.
November 15 2002	Formal response received from Gwawaenuk First Nation, outlining positions and views on rights, title and planning process, identifying recommended changes to planning units, and requesting funding to conduct further studies. Changes to draft Plan undertaken to accommodate concerns where appropriate, and response provided to Gwawaenuk.
November 25 2002	Letter received from Namgis First Nation, identifying concerns and issues with the draft Plan. No specific comments or suggestions provided on planning unit information and recommendations within Namgis tradional territory.
November 26-28 2002	Letters sent to Gwawaenuk, Tsawataineuk and Namgis, acknowledging receipt of comments and indicating their letters would be placed on MSRM website.

Appendix 4. Compatibility & Siting Assessments

Decision Rules For Determination of Acceptable Uses and Activities in North Island Straits Planning Units

General Considerations:

A use is initially identified as **acceptable** if the use already exists and is tenured in a unit.

An existing use initially identified as acceptable (in #1 above) is changed to **acceptable in current location** if information and input determines there is an expectation of significant user or resource conflicts; or if the unit is unable to support additional uses due to a lack of capable areas that meet established siting criteria.

A use is initially identified as **conditionally acceptable** if it does not exist in the unit, and would be considered potentially compatible with existing values and resources, depending on the submission of more specific information with a tenure application. Such information could include: biophysical capability, results of a required review process, completion of a campsite strategy, or development of operating guidelines.

A use is initially identified as **inappropriate** if the use is currently not present in the unit and: the biophysical capability assessment of the area shows no or poor capability for the use; if information and input determines there is an expectation of significant user or resource conflicts, or if the use is considered incompatible with adjacent upland designations

An activity (i.e. not tenured or managed by the provincial government) is identified as an **ongoing, non-tenured activity** if it is known to be taking place in a unit.

Specific Considerations:

- **Shellfish beach aquaculture** use (beach or deep water aquaculture) is identified as **acceptable** if provincial government shellfish capability studies show high to moderate capability and such development does not alienate known shellfish beaches with established First Nations, recreational or commercial harvesting.
- **Shellfish deep water aquaculture** use is identified as **acceptable** if provincial government shellfish capability studies show high to moderate capability exists in a unit.
- **Marine plant aquaculture** use is initially identified as **acceptable** if provincial government capability mapping for deep water scallop aquaculture shows high to moderate capability exists in a unit.
- **Finfish aquaculture** use is identified as **acceptable** where provincial government opportunity studies show high to moderate capability. Where the unit exhibits compatibility or capacity concerns, the use may be changed.
- **Log Handling, Storage and Infrastructure** Use is identified as **acceptable** if industry has identified future timber harvesting plans for adjacent upland, and siting criteria can be addressed.
- **General Commercial** use is identified as **acceptable** in those units where it already occurs.
- **Private Moorage** use is initially identified as **acceptable** if it exists in a unit and/ or there is an adjacent Indian Reserve or private land parcel on the upland.
- **Rural Development** use is identified as **acceptable** if the unit currently contains tenured floating structures or floating communities.
- **Marine Telecommunications & Utilities** use is identified as **acceptable** if there is an adjacent community on the upland, if there is an expectation of development (such as utilities supporting sanitary facilities at a campsite) or if the unit is considered suitable for a potential wind or wave energy generation facility.
- **Community and Public Institutional** use is initially identified as **acceptable** if there is an adjacent community on the upland, or if the need for public access is anticipated (e.g. the upland is a recognized protection area candidate and a dock is required to provide access).

- **Commercial Recreation: Guiding Operations** are generally identified as **acceptable** . Where guiding activities have the potential to impact sensitive migratory bird values this use is **conditional** upon the adherence to appropriate guidelines.
- **Commercial Recreation: Lodges and Base Camps** are generally **acceptable**, with the following exceptions. This use is not considered acceptable in units where it may detract from existing recreational values, in units that have very high levels of recreation and tourism use, and in units with sensitive conservation values. The use is not considered acceptable in units with existing road-accessible tourism infrastructure.
- **Conservation** use is identified as **acceptable** as a potential use in all units as well as in units where *Land Act* reserves or notations of interest already occur.

Modifications:

All of the above general and specific **initial** determinations may be modified as a result of social preferences, including comments and concerns from local government, the public and First Nations.

Table A3: Compatibility Matrix between Foreshore & Nearshore Uses on the Same or Adjacent Site

	Shellfish Beach Aquaculture	Shellfish Deep Water Aquaculture	Marine Plant Aquaculture	Finfish Aquaculture	Log Handling, Storage &	General Commercial	Light Industrial	Private Moorage	Rural Development	Marine Telecom. & Utilities	Community & Public Institutional	Commercial Recreation: Guiding	Comm. Rec.: Lodges and Base	Conservation	Public Recreation	Commercial Fisheries	Marine Transportation	First Nations Traditional Use
Shellfish Beach Aquaculture	✓																	
Shellfish Deep Water Aquaculture	✓	✓																
Marine Plant Aquaculture	✓	✓	✓															
Finfish Aquaculture	X	✓	✓	X														
Log Handling, Storage & Infrastructure	X	X	X	X	✓													
General Commercial	X	✓	✓	✓	✓	✓												
Light Industrial	X	✓	✓	✓	✓	✓	✓											
Private Moorage	X	✓	✓	✓	✓	✓	✓	✓										
Rural Development	X	X	X	X	✓	✓	✓	✓	✓									
Marine Telecommunications & Utilities	✓	X	X	X	✓	✓	✓	✓	✓	✓								
Community & Public Institutional	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Commercial Recreation: Guiding Operations	X	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	✓						
Commercial Recreation: Lodges and Base Camps	X	X	X	X	X	X	X	X	X	X	X	✓	✓					
Conservation	X	X	X	X	X	X	X	X	X	X	✓	X	X	✓				
Public Recreation	X	X	✓	X	X	X	X	X	X	X	✓	✓	X	X	✓			
Commercial Fisheries	X	X	X	X	X	X	X	X	X	X	✓	✓	✓	X	✓	✓		
Marine Transportation	✓	X	X	X	✓	✓	✓	✓	✓	X	✓	✓	✓	X	✓	✓	✓	
First Nations Traditional Use	X	✓	✓	✓	✓	X	X	✓	X	X	✓	X	X	X	X	✓	✓	✓

X=not compatible

✓= compatible

Table A4: Compatibility Matrix for Foreshore & Nearshore Use/Activity versus Resources

	Shellfish Beach Aquaculture	Shellfish Deep Water Aquaculture1	Finfish Aquaculture	Log Handling, Storage and Infrastructure	General Commercial	Private Moorage	Communication Sites	Private/ Public Utilities[2]	Commercial Rec: Lodges and Base Camps	Commercial Rec Guiding Operations	Conservation
Water Depth				25m[3]		M[4]	-				
Salmon Stream (mouth)	S[5], T[6]	S[7], T[8]	1km[9]	100m[10]		100m[11]	30m	30m[12]	30m/ 60m/ 300m[13]	15m/30m[14]	
Clam/ Oyster Beach	NC[15]	NC[16]	125m/ 300m[17]	200m[18]		125m	-	60m	60m/ 150m[19]	15m/30m[20]	
Eelgrass Beds	NC[21]	NC[22]	M[23]	100m		NC[24]	-	30m	NC		
Kelp Beds	NC[25]	NC[26]	M[27]	-		NC[28]	-		30m[29]		
Rocky Reefs	NC[30]	NC[31]	M[32]	-		-	-		30m[33]		
Estuaries/ Lagoons	100m	100m	M[34]	100m		100m	30m	60m	30m[35]	NC[36]	
Salt Marshes and Mudflats	30m[37], M[38]	30m, M[39]	M[40]	100m		30m	-	NC	30m	NC[41]	
Seal/ Sea lion Haulout	500m	500m	M[42]	500m		250m	200m	100m			
Whale Feeding Areas or Migration Pathways	500m	500m	M[43]	1km[44]		-					
Eulachon Migration and Rearing	T[45]	T[46]	M	M[47]		-					
Herring Spawning and Migration	T	T	1km[48]	T		-					
Waterfowl habitat	M[49], T[50]	M[51], T[52]	-	-		-					
Seabird Colonies	500m[53]	500m[54]	-	1km, 200m[55]		500m, 100m[56]	NC[57]	300m[58]	200m		
Wildlife Trees/ Heronries	100m	100m	-	100m/ 300m[59]		-	100m	100m	100m/ 200m[60]		
Invertebrate Habitat	-	M	M[61]	M		-					
Red/ Blue Species	M	M	M	M		-					
Parks, Ecological Reserves, Marine Protected Areas	NC	NC	1km[62]	NC		NC					
Areas of significant heritage or cultural value	-	-	NC[63]	-							

<table>
<tr><td colspan="2">References are intended to clarify how management direction may vary depending on specific circumstances. Where no source is cited, management direction is considered to apply in all situations</td></tr>
<tr><td>Key:
A: Acceptable
M: Specific Management Provisions required to address interaction. Refer to management direction in for specific planning units
S: Siting Criteria established to address interaction
T: Timing window established to address activities/uses during critical periods
NC: Not Compatible – no overlap permitted</td><td>Sources:
MOU: November 2001 MOU between BCAL (LWBC) and Provincial Referral Agencies
SMP: Provincial Shellfish Management Plan – MAFF/LWBC
FMP: LWBC Commercial Finfish Aquaculture Management Plan Schedule C</td></tr>
</table>

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[1] Shellfish Deep Water Aquaculture is used as a proxy for Marine Plant Aquaculture – requirements Scallop Deep Water Aquaculture closely approximate those required for commercial kelp production.

[2] For projects falling below the threshold for environmental assessment review processes.

[3] Log booms, booming grounds and heli-log drop areas require water depth at least 25m. Log dumps must be located so that logs can be watered at any tide without grounding.

[4] Boats, floats and other floating structures should be located and firmly moored in deep water, far enough offshore to prevent grounding at low tide (MOU BMP)

[5] Shellfish culture is not to be conducted within the braided channels of any salmonid creek. (SMP)

[6] Activities are to be timed to minimize impacts on plants and animals (e.g. avoiding main spawning windows) (SMP)

[7] Shellfish culture is not to be conducted within the braided channels of any salmonid creek. (SMP)

[8] Activities are to be timed to minimize impacts on plants and animals (e.g. avoiding main spawning windows) (SMP)

[9] From mouth of significant salmonid-bearing stream as determined by DFO and the Province (FMP)

[10] Distance specified from salmonid spawning areas (MOU)

[11] Distance specified from spawning areas

[12] Distance specified for salmonid spawning areas

[13] 30 m buffer for streams except stream approaches and crossings; 60m buffer specified for salmonid spawning areas. 300m specified for grizzly and/or black bear fishing sites. (MOU)

[14] Spacing specified for sanitary and domestic waste facilities. 15m separation is the minimum acceptable buffer for self-contained or composting facilities, 30m for all others.

[15] No overlap is permitted – 100m separation is considered desirable (MOU)

[16] No overlap is permitted – 100m separation is considered desirable (MOU)

[17] A minimum spacing of 125 m is required from all shellfish beds and commercial shellfish growing operations. At least 300m must separate finfish aquaculture sites and inter-tidal shellfish beds that have regular or traditional use for First nations, recreational or commercial fisheries where beds are exposed to water flow from a salmon farm. (FMP)

[18] Intertidal wood storage is not permitted; suitable precautions to be taken to ensure this does not occur under any conditions of tide, current, weather. Dragging of logs across beach areas is not permitted (MOU)

[19] 150m distance required for docks and outfalls (MOU)

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[20] Spacing specified for sanitary and domestic waste facilities. 15m separation is the minimum acceptable buffer for self-contained or composting facilities, 30m for all others.

[21] No overlap permitted – 5m minimum, 100m separation is considered desirable. Installation of any structures must not alter or disrupt eelgrass habitats (MOU,SMP)

[22] No overlap permitted – 5m minimum, 100m separation is considered desirable. Installation of any structures must not alter or disrupt eelgrass habitats (MOU, SMP)

[23] Where identified as sensitive fish habitat, an appropriate siting distance will be determined by DFO and the Province. (FMP)

[24] Not compatible except where approved by DFO

[25] No gear and/or floating structures to be established over kelp bed habitats (SMP)

[26] No gear and/or floating structures to be established over kelp bed habitats (SMP)

[27] Where identified as sensitive fish habitat, an appropriate siting distance will be determined by DFO and the Province. (FMP)

[28] Not compatible except where approved by DFO

[29] Where identified as a sensitive ecosystem (MOU)

[30] No gear and/or floating structures to be established over rocky reef habitats (SMP)

[31] No gear and/or floating structures to be established over rocky reef habitats (SMP)

[32] Where identified as sensitive fish habitat, an appropriate distance will be determined (FMP)

[33] Where identified as a sensitive ecosystem (MOU)

[34] Where identified as sensitive fish habitat, an appropriate distance will be determined by DFO and the Province (FMP)

[35] Raised walkways may be acceptable (MOU)

[36] Kayak landing sites should be located away from estauaries and lagoons. Landing sites should be located and used ina way to minimise physical and biological impacts to the foreshore (MOU BMP)

[37] Where identified as a sensitive ecosystem (MOU)

[30] Installation of any structures must not alter or disrupt saltmarsh habitats (SMP)

[39] Installation of any structures must not alter or disrupt saltmarsh habitats (SMP)

[40] Where identified as sensitive fish habitat, an appropriate distance will be determined by DFO and the Province (FMP)

[41] Kayak landing sites should be located away from salt marshes. Landing sites should be located and used ina way to minimise physical and biological impacts to the foreshore (MOU BMP)

[42] Appropriate distance from areas extensively used by marine mammals to be determined by DFO and the Province.(FMP)

[43] Appropriate distance from areas extensively used by marine mammals to be determined by DFO and the Province.(FMP)

[44] Distance specified from migration pathways only (MOU)

[45] Activities are to be timed to minimize impacts on plants and animals (e.g. avoiding main spawning windows) (SMP)

[46] Activities are to be timed to minimize impacts on plants and animals (e.g. avoiding main spawning windows) (SMP)

[47] To be determined on a site by site basis (DFO BMP)

[48] Where herring spawning areas are designated as vital, major or important by DFO and the Province. (FMP)

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[49] Uncultivated or harvested "leave strips" are to be incorporated within the design of beach culture tenures to minimise overall impact on shore birds. Leave strips to cover at least 30% of the tenure area at any given time. (MOU BMP)

[50] Where possible, aquacultural activity should take place during periods of low bird use (Both seasonal and diurnal) (MOU BMP)

[51] Longlines netting (where used) should extend a minimum of 20m below the surface of the water to minimise conflict with diving ducks. (BMP)

[52] Where possible, aquacultural activity should take place during periods of low bird use (Both seasonal and diurnal) (MOU BMP)

[53] Includes rafting and congregating areas as well as colonies (MOU)

[54] Includes rafting and congregating areas as well as colonies (MOU)

[55] 1km from seabird colonies, 200 m from seabird congregating areas (MOU)

56 500m from seabird colony, 100m from seabird congregating area

[57] no overlap with seabird colonies accepted except in critical situations where no other option exists. Referral required (MOU)

[58] Alternately installation to occur outside of nesting/rearing period.

[59] 100m spacing for wildlife trees, 300m from Heronries. Helicopter flight paths should be routed a minimum of 1 km from eagle nest trees or Heronries (MOU)

[60] 200m for heronries (MOU)

[61] Where invertebrate habitat includes surveyed commercial dive fishery areas, siting should ensure that surveyed areas are not alienated from harvesting (FMP)

[62] Siting not within line of sight up to 1km in all directions from existing or approved proposals for federal, provincial or regional parks and MPAs, existing or approved ecological reserves <100ha

[63] Sites determined in the *Heritage and Conservation Act*

Appendix 5. Supporting Information for Socio-Economic and Environmental Assessments

Figure A1: General Approach to Environmental Risk Assessment for Individual Planning Units

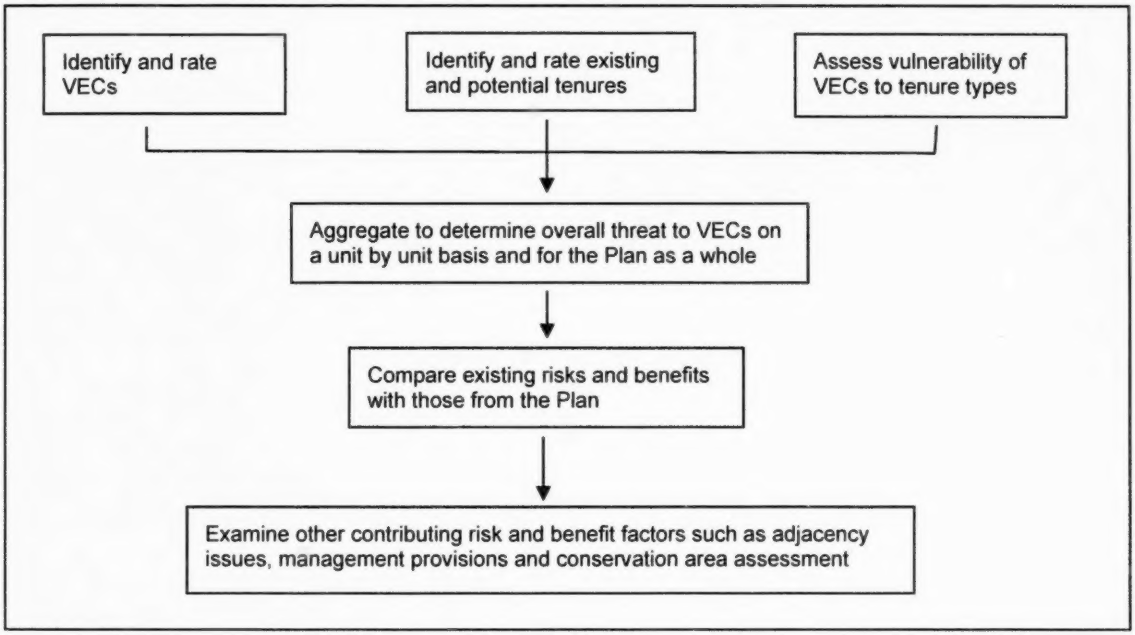
Identify and rate VECs
Identify and rate existing and potential tenures
Assess vulnerability of VECs to tenure types
Aggregate to determine overall threat to VECs on a unit by unit basis and for the Plan as a whole
Compare existing risks and benefits with those from the Plan
Examine other contributing risk and benefit factors such as adjacency issues, management provisions and conservation area assessment

Table A5 Rating scheme for tenure acceptability codes

Valued Environmental Component	Measurement	Rating
Kelp beds	# hectares/bed	1 = >0 - < 200 ha 2 = 200 - < 400 ha 3 = > 400 ha
Clam beaches	# hectares/bed	1 = >0 - < 50 ha 2 = 50 - < 100 ha 3 = > 100 ha
Salmon streams	# salmonid streams	1 = > 0 - < 10 streams 2 = 10 - < 20 streams 3 = > 20 streams
Birds	Presence	3 = CWS area of interest
Pinnipeds (seals and sea lions)	Presence	3 = occurrence of haul out sites

Table A6. Rating scheme for tenure acceptability codes

Land Tenure Acceptability Code	Existing Tenures	Rating
Use Inappropriate (X)	0	0
Use acceptable at existing tenure levels; No new tenures of this type should be accepted (●)	0	0
Use conditionally acceptable (○)	< 10	1
Use acceptable and appropriate (✓)	10 - <20	2
	> 20	3

Table A7. Rating scheme for VEC/land use interactions

VECs ➔ Tenured Activities ⬇	Kelp (K)	Clam (C)	Salmon (S)	Birds (B)	Pinnipeds (P)
Shellfish Beach Aquaculture	1	21	1	1	1
Shellfish Deepwater Aquaculture	1	21	1	1	1
Marine Plant Aquaculture	1	1	1	22	22
Finfish Aquaculture	1	1	23	24	25
Log Handling, Storage and Infrastructure	26	1	1	1	1
General Commercial	37	37	37	37	37
Light Industrial	37	36	37	37	37
Private Moorage	28	1	1	1	1
Rural Development	39	39	39	39	39
Marine Telecommunications & Utilities	210	210	1	1	1
Community & Public Institutional	37	37	37	37	37
Comm. Recreation-Guiding	111	1	1	212	212
Comm. Recreation-Base Camps & Lodges	1	1	1	1	312

1. Notes on specific interactions:
2. Siting criteria prohibit overlap, but potential impact on natural beds from broadcasting.
3. No siting criteria and potential for birds and pinnipeds to be disturbed by activity.
4. 1 km separation distance required, but potential for larger scale impact due to escapement.
5. No separation distance required and potential impact to birds being attracted to sites.
6. Although management provisions in place, no separation distance is required.
7. No separation distance or specific management provisions and potential impacts could result from woody debris.
8. No siting criteria required and potential impact from physical structures or from affecting water flow and sedimentation patterns.
9. Siting criteria prohibit overlap, but potential impact from affecting water flow and sedimentation patterns.
10. No siting criteria required and potential significant impact from physical structures, waste discharges and disturbance to birds and pinnipeds.
11. No siting criteria required and potential impact from physical structures.
12. No siting criteria and potential impact from underwater recreation activities such as diving.
13. No siting criteria and potential impact due to disturbance.
14. 60 m or 150 m separation distance, but potential.

Potential interactions were rated on a scale from 0 to 3 as follows:

0 = There is likely no interaction between VEC and activity

1 = Siting criteria and other mitigation measures reduce impact considerably or VEC has limited sensitivity to activity.

2 = Siting criteria apply but there is residual impact, or no siting criteria apply and VEC is moderately sensitive to the activity.

3 = No siting criteria or mitigation measures apply and significant impact is likely.

Table A8. Rating scheme for environmental risk

Rating	Unit risk total
Low	< 100
Moderate	100 - < 200
High	>= 200

Table A9. Distribution of key biological attributes among management emphasis categories

Key Biological Attributes	Management Emphasis			
	Conservation (15 units)	Recreation (18 units)	General Marine (28 units)	Community (5 units)
Threatened/Endangered Species				
Red listed species (# units present)	10	12	10	2
Blue listed species (# units present)	10	9	7	2
Benthic Habitats				
estuary (ha)	85	0	57	51
eelgrass beds (# units present)	3	3	7	0
kelp beds (ha)	3258	1353	1010	185
Invertebrates				
high or mod-high invertebrate values (# units present)	14	12	14	5
intertidal clams (ha)	462	186	284	250
prawn values (# units present)	4	7	14	1
shrimp values (# units present)	1	2	2	
abalone (# units present)	3	1		
corals (# units present)	1			
Fish				
eulachon (# units present)	1	0	3	0
herring spawning (# recorded spawns)	102	81	147	45
smolt holding area (# units present)	1	1	0	0
adult salmon holding area (# units present)	2	10	12	3
salmon migration (# units present)	5	10	15	2
salmonid streams (# streams)	86	99	293	83
rockfish values (# units present)	8	3	3	1
Birds				
CWS area of interest (# units present)	15	11	16	3
migratory birds (# units present)	11	9	13	3

Key Biological Attributes	Management Emphasis			
	Conservation (15 units)	Recreation (18 units)	General Marine (28 units)	Community (5 units)
shorebirds (# units present)	5	0	0	1
waterfowl (# units present)	7	5	6	4
alcids (# units present)	1	2	0	0
pelagic birds (# units present)	1	1	0	0
breeding sites (# units present)	5	1	0	1
eagles (# units present)	3	1	1	1
murrelets (# units present)	4	3	3	0
Marine Mammals				
harbour porpoises (# units present)	5	7	6	1
Dall's porpoises (# units present)	4	0		0
Pacific white sided dolphins (# units present)	3	1		0
humpback sightings (# units present)	1	0		0
humpback habitat (# units present)	5	6		1
Minke whale summer feeding (# units present)	2	2	3	0
orca habitat (# units present)	9	12	12	2
orca migration (# units present)	2	0		0
white sided dolphins (# units present)	0	0		0
grey whales (# units present)	1	1		1
seal and sea lion haulout (# units present)	11	3	4	1

Figure 7. Summary of Quantitative Unit by Unit Environmental Risk Assessment

Unit	Emphasis	Existing Environmental Risk		Plan Environmental Risk		Residual Risk Class		Aggregate Risk Class
		Habitat VECs	Species VECs	Habitat VECs	Species VECs	Habitat VECs	Species VECs	
1	Conservation	0	0	6	12	Low (6)	Low (12)	Low (18)
2	Recreation	0	0	12	24	Low (12)	Low (24)	Low (36)
3	General marine	13	0	10	0	Decrease (-3)	No Change (0)	Decrease (-3)
4	General marine	5	0	30	0	Low (25)	No Change (0)	Low (25)
5	General marine	17	18	91	93	Low (74)	Low (75)	Moderate (149)
6	General marine	2	0	24	0	Low (22)	0	Low (22)

Unit	Emphasis	Existing Environmental Risk		Plan Environmental Risk		Residual Risk Class		Aggregate Risk Class
		Habitat VECs	Species VECs	Habitat VECs	Species VECs	Habitat VECs	Species VECs	
7	Recreation	35	33	69	69	Low (34)	Low (36)	Low (70)
8	Recreation	6	0	56	0	Low (50)	No Change (0)	Low (50)
9	Conservation	31	30	69	75	Low (38)	Low (45)	Low (83)
10	Recreation	1	6	10	33	Low (9)	Moderate (27	Low (36)
11	Conservation	30	18	112	66	Low (82)	Low (48)	Moderate (130)
12	General marine	10	9	75	63	Low (65)	Low (54)	Moderate (119
13	General marine	31	18	81	51	Low (50)	Low (33)	Low (83)
14	Conservation	51	27	30	15	Decrease (-21)	Decrease (-12)	Decrease (-33)
15	Recreation	2	0	20	0	Low (18)	No Change (0)	Low (18)
16	Community	39	0	170	0	Moderate (105)	No Change (0)	Moderate (105)
17	Recreation	6	9	32	54	Low (26)	Low (45)	Low (71)
18	Recreation	12	12	51	57	Low (39)	Low (45)	Low (84)
19	General marine	22	37	60	48	Low (38)	Low (33)	Low (71)
20	General marine	6	0	26	0	Low (20)	No Change (0)	Low (20)
21	General marine	8	0	30	0	Low (22)	No Change (0)	Low (22)
22	Conservation	0	0	28	42	Low (28)	Low (42)	Low (70)
23	Recreation	17	36	60	156	Low (43)	Moderate (120)	Moderate (163)
24	Recreation	3	6	22	42	Low (19)	Low (36)	Low (55)
25	Recreation	11	18	74	120	Low (63	Moderate (102)	Moderate (165)

Unit	Emphasis	Existing Environmental Risk		Plan Environmental Risk		Residual Risk Class		Aggregate Risk Class
		Habitat VECs	Species VECs	Habitat VECs	Species VECs	Habitat VECs	Species VECs	
26	General marine	1	0	12	0	Low (11)	No Change (0)	Low (11)
27	General marine	4	6	14	27	Low (10)	Low (21)	Low (3)
28	Conservation	20	30	26	45	Low (6)	Low (15)	Low (21)
29	General marine	2	12	21	150	Low (19	Low (138	Moderate (157
30	General marine	3	0	17	0	Low (14)	No Change (0)	Low (14)
31	Recreation	4	6	52	60	Low (48	Low (54	Moderate (102)
32	General marine	71	72	230	252	Moderate (159)	Moderate (180)	High (339))
33	General marine	0	0	0	0	No Change (0)	No Change (0)	No Change (0)
34	General marine	20	30	94	168	Low (74)	Moderate (138)	Moderate (212)
35	Recreation	6	3	86	60	Low (80)	Low (57)	Moderate (137)
36	General marine	3	6	58	186	Low (55)	Moderate (180)	High (235)
37	Conservation	0	0	34	30	Low (34)	Low (30)	Low (64)
38	General marine	20	15	88	72	Low (68)	Low (57)	Moderate (125)
39	Community	31	0	89	0	Low (58)	No Change (0)	Low (58)
40	Recreation	1	0	8	0	Low (7)	No Change (0)	Low (7)
41	Recreation	6	18	25	72	Low (19)	Low (54)	Low (73)
42	Community	140	81	167	102	Low (27)	Low (21)	Low (48)
43	Conservation	11	6	120	108	Moderate (109)	Moderate (102)	High (211)

Unit	Emphasis	Existing Environmental Risk		Plan Environmental Risk		Residual Risk Class		Aggregate Risk Class
		Habitat VECs	Species VECs	Habitat VECs	Species VECs	Habitat VECs	Species VECs	
44	Recreation	15	0	57	0	Low (42)	No Change (0)	Low (42)
45	Community	54	60	105	132	Low (51)	Low (72)	Moderate (123)
46	Community	116	72	173	108	Low (57)	Low (36)	Low (93)
47	Conservation	18	48	36	96	Low (18)	Low (48)	Low (66)
48	General marine	6	6	129	168	Moderate (123)	Moderate (162)	High (285)
49	Conservation	9	18	63	132	Low (54)	Moderate (114)	Moderate (168)
50	Recreation	0	0	56	0	Low (56)	No Change (0)	Low (56)
51	Conservation	21	9	130	60	Moderate (109)	Low (51)	Moderate (160)
52	General marine	4	0	43	0	Low (39)	No Change (0)	Low (39)
53	Conservation	2	2	32	90	Low (30)	Moderate (78)	Moderate (108)
54	Conservation	0	0	1	12	Low (1)	Low (12)	Low (13)
55	Recreation	8	30	50	150	Low (42)	Moderate (120)	Moderate (162)
56	General marine	0	0	11	42	Low (11)	Low (42)	Low (53)
57	Conservation	0	0	1	6	Low (1)	Low (6)	Low (7)
58	Conservation	0	0	0	36	No Change (0)	Low (36)	Low (36)
59	General marine	14	0	54	0	Low (40)	No Change (0)	Low (40)
60	General marine	5	3	58	45	Low (53)	Low (42)	Low (95)
61	General marine	0	0	0	0	No Change (0)	No Change (0)	No Change (0)

Unit	Emphasis	Existing Environmental Risk		Plan Environmental Risk		Residual Risk Class		Aggregate Risk Class
		Habitat VECs	Species VECs	Habitat VECs	Species VECs	Habitat VECs	Species VECs	
62	General marine	1	0	11	0	Low (10)	No Change (0)	Low (10)
63	General marine	4	6	32	72	Low (28)	Low (66)	Low (94)
64	Recreation	3	0	54	0	Low (51)	No Change (0)	Low (51)
65	General marine	15	30	33	78	Low (18)	Low (48)	Low (66)
66	General marine	0	6	0	54	0	Low (48)	Low (48)

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